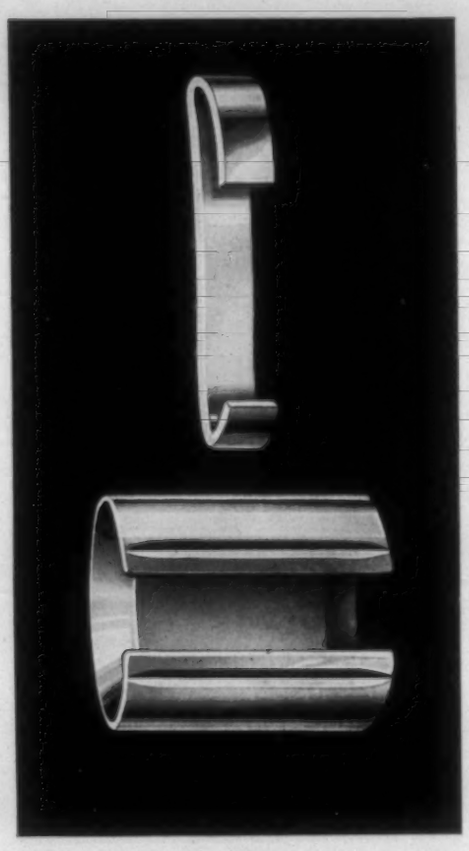
TEXTILE BULLETIN

VOL. 60 MAY 15, 1941 NO. 6

FOR FIRST QUALITY YARNS
USE FIRST QUALITY TRAVELERS



The Bowen Patented Bevel Edge feature of U. S. Ring Travelers produces ideally smooth, even yarn. There are no angular edges to flatten the end. There are no split ends in throwing rayon and silks—no fly waste in the spinning and twisting of cotton, worsted, asbestos, kindred fibres. Made and stocked in all sizes and weights, for all kinds and counts of yarns.

In the manufacture of Universal Standard Ring Travelers, only materials of the highest quality, steel and bronze alloys, are used. The most modern machine tools contribute uniformity of weight and shape. Electrically controlled equipment insures proper and uniform temper in the treatment of each particular metal.

U. S. Travelers reduce the cost of producing high quality yarns because they are designed and made for fast, smooth work . . . with the closest attention to every detail. They are the results of years of experience of men who know the needs of the textile industry in this field—that is why they are the choice of experienced textile operators the country over.

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Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

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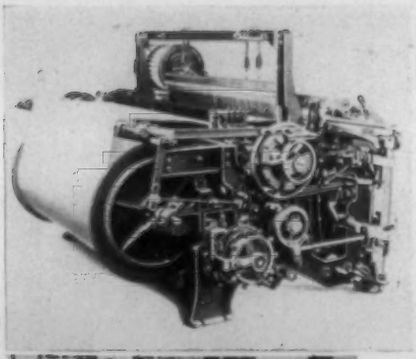

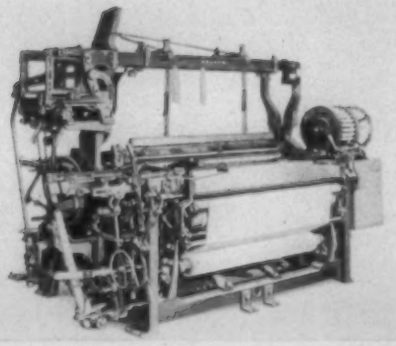

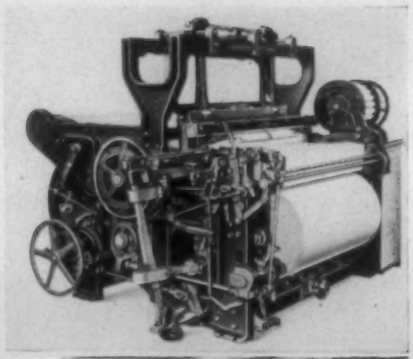

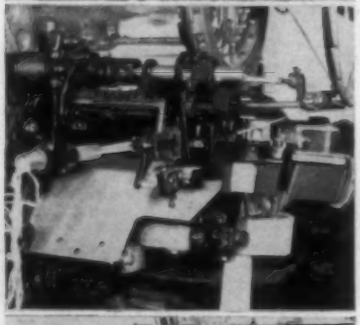

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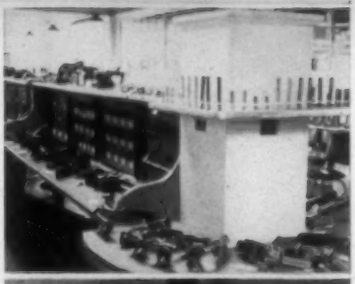

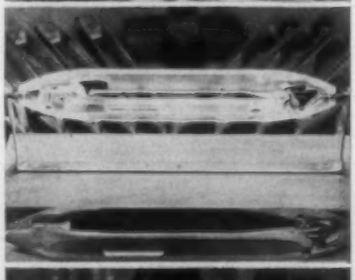

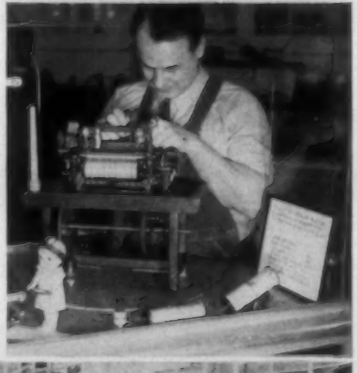

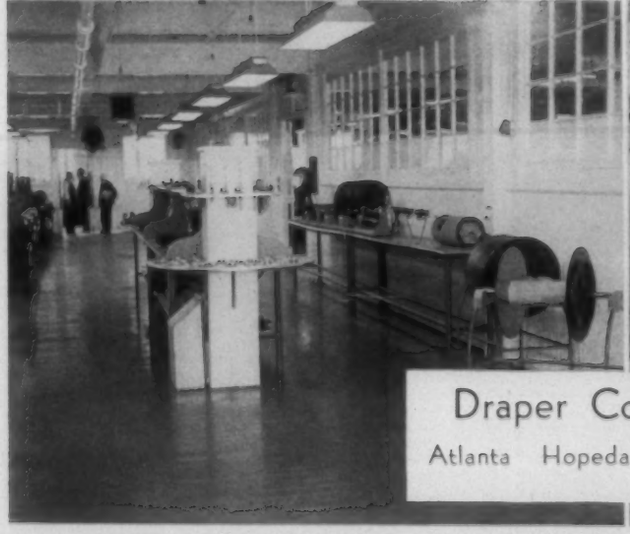

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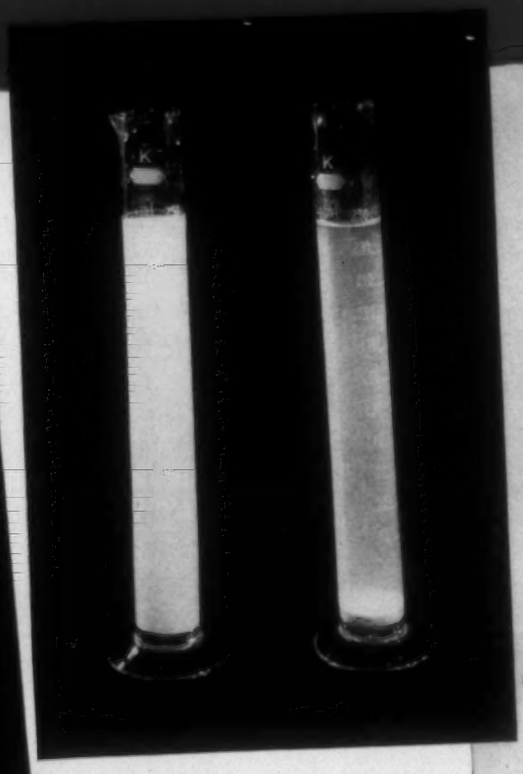

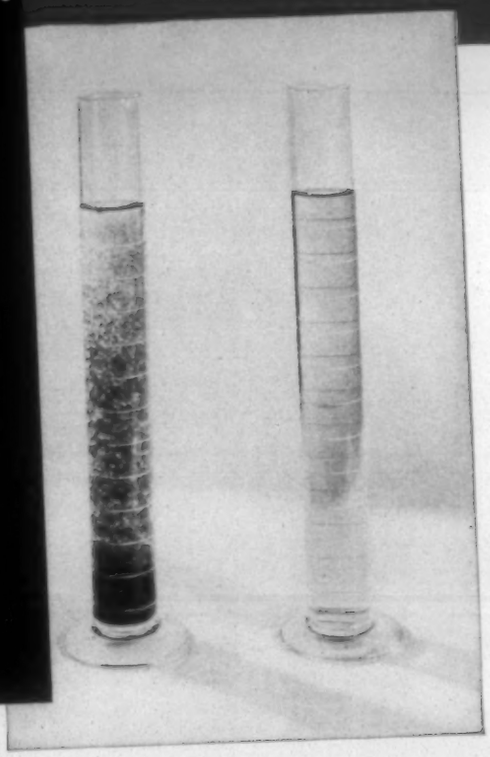

Photo at left illustrates the effect of QUADRAFOS in a soap solution in hard water. Both graduates contain soap solutions in water of 200 p.p.m. $CaCO_3$ hardness equivalent. Graduate at right contains 0.1% QUADRAFOS. Center photo shows deflocculating action of QUADRAFOS in clay suspensions. Graduate at left contains 0.1% QUADRAFOS. Photo on right shows the ability of QUADRAFOS to prevent the precipitation of metal salts. A solution of 84 p.p.m. Ferric chloride was made up and was treated with a few drops of ammonia to precipitate Iron Hydroxide. The solution at the right was cleared up by the addition of 0.5% QUADRAFOS.

QUADRAFOS is a carefully balanced anhydrous polyphosphate. It is rapidly increasing in industrial use because of its ability to soften water effectively without precipitation.

Besides preventing the precipitation of calcium and magnesium compounds QUADRAFOS is remarkably effective in holding the ions of many other elements in solution. Iron that contributes to operation difficulties when introduced with natural waters or as an impurity in other chemical raw materials may be sequestered and rendered inactive with QUADRAFOS. It also sequesters and renders inactive nickel chromium, lead and many other metallic ions.

A booklet on the advantages and uses of QUADRAFOS is available on request. Write for your copy and it will be sent to you promptly, without obligation.

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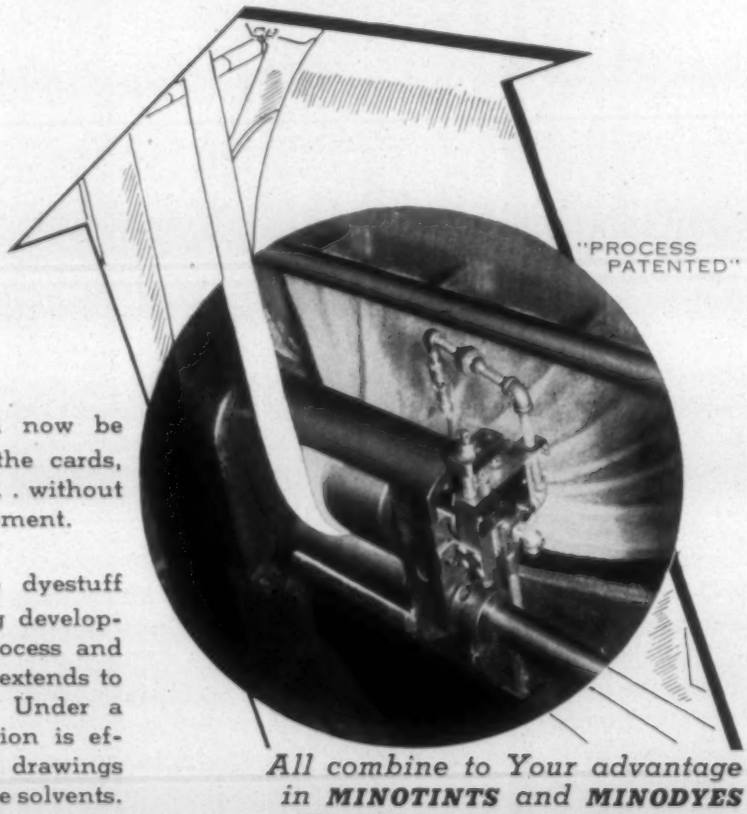
They make YARN DYE PROCESSING *Tomorrow's News* TODAY!

★ ★ ★ **MINOTINTS** present a fundamentally different - a simplified, effective and economical Tinting Process for color application to slivers for Reverse Twist Yarns, and an unmistakable *identity* for varied constructions where Fugitive Dyes are essential.

★ ★ ★ **MINODYES** likewise advance an entirely new form of Fast Color treatment for Carpet Yarns, Wrapping Twines and allied materials.



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NEW YORK, N. Y. CHARLOTTE, N. C.

ARE YOU PREPARED TO MEET A LINEN SHORTAGE?

Get facts today on linen-like textures in Crown* Tested Spun Rayon Fabrics

• • •

Regardless of what's going on in the rest of the world, American women are going to keep right on buying towels. And *tablecloths, napkins, handkerchiefs, scarfs.*

But what about the reduction of linen imports? How are you going to meet the demands for the so-called "linens and domestics"?

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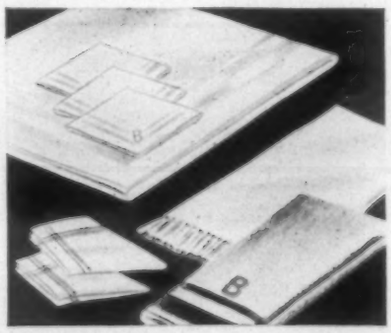
Crown Tested Spun Rayon Fabrics are the answer. Greige mills have proved that it is both possible and practical to produce durable, linen-like textures in spun rayon fabrics. Dyers and finishers have found that these fabrics possess even better dyeing properties—that they result in brighter, clearer shades which are generally more satisfactory than heretofore possible. And consumers, from the millions of yards of these fabrics which have gone into dresses and sports apparel, have learned that they can be trusted to give complete satisfaction.



To help you work out the fabric effects you desire, we have accumulated much valuable data on linen-like textures in Crown Tested Spun Rayon Fabrics. Let us assist you in applying this versatile fiber to meet your requirements.

Facts about the linen-like textures in Crown Tested Spun Rayon Fabrics

1. ***Highly absorbent.*** Handkerchiefs recently tested 36% more absorbent than linen.
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3. ***Fast colors.*** The spun rayon fabrics are not subject to crocking.
4. ***Serviceable.*** Proved by millions of yards of these fabrics which have gone into dresses and sports apparel.
5. ***Permanent whiteness.*** These fabrics stay really white. No tendency to yellow with age.
6. ***Lint-free.*** Suitable for cleaning eye-glasses, the best test of lint freedom.

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World's Largest Producer of Rayon Yarn

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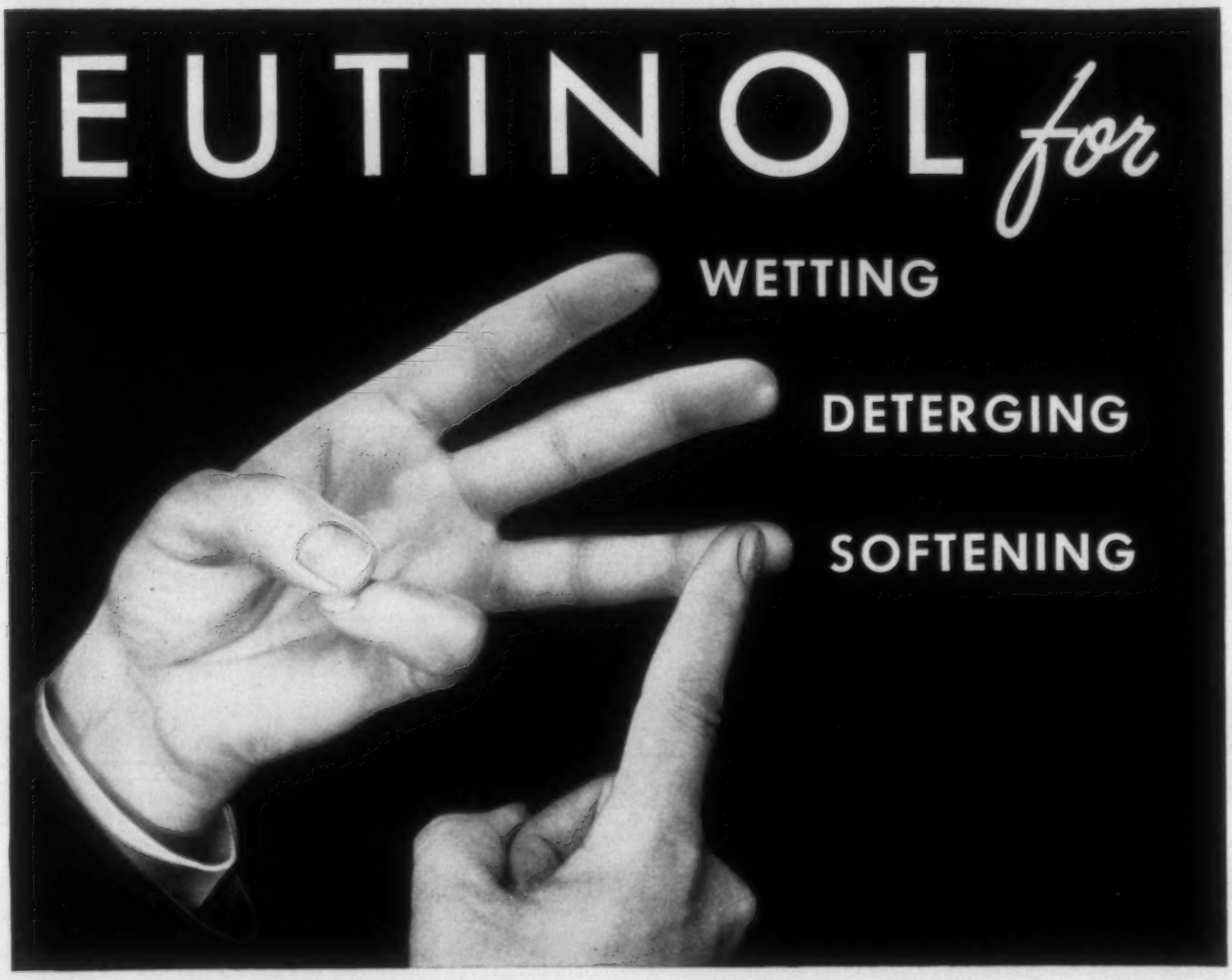

EUTINOL, another Jacques Wolf laboratory achievement for remarkable efficiency and real economy! EUTINOL simplifies print washing, yields better results. It's a 3 in 1 product, a concentrated fluid with *rapid wetting*, maximum *deterging* and *softening* properties. Can be used on *all* fibres and produces brighter, more lustrous colors and softer fabrics!

EUTINOL rinses freely and when used with soap increases its action.

EUTINOL has high cation-active, softening qualities combined with standard wetting and detergent features—qualities not heretofore produced successfully in combination. Actually *three* processes in *one!*

SULPHONATED OLEVENE

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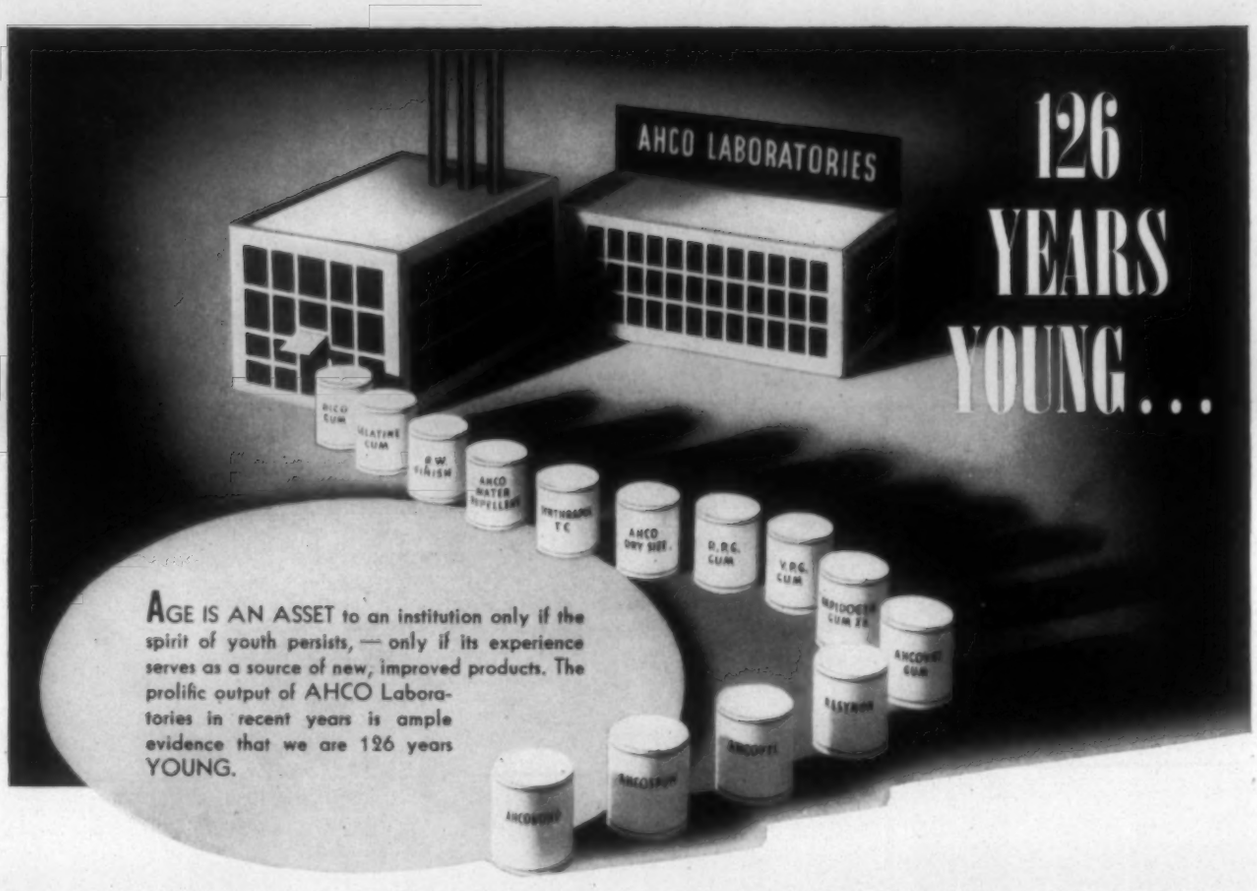

LET AHCO PRODUCTS DO BETTER TEXTILE PROCESSING FOR YOU

AHCOVEL. The only substantive softener for all textile fibres which does NOT change shades or affect their light fastness. Relatively permanent; resistant to washing and dry cleaning; does not discolor or turn rancid with heat or age; non greasy and odorless.

AHCOSPUN. Sizes for Spun Rayon. Shipped in dry form. Uniform, no lumps, high tensile strength, readily washed out. A formula for every need.

RESYNON. A relatively permanent finish for cottons and rayons which does not require baking, or turn rancid or change color with heat or age. Gives body without stiffness, increases lustre, and improves brightness of colors.

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TEXTILE BULLETIN

Vol. 60 May 15, 1941 No. 6

Developments and Trends in Mill Processing of Rayon Staple*

By Heath O. Kennette

E. I. du Pont de Nemours & Co.

THE past ten years have seen a tremendous expansion in the spun rayon staple field. The consumption of rayon staple in the United States in 1930 was roughly eight hundred thousand (800,000) pounds and in 1940 was approximately ninety-nine million (99,000,000) pounds. The world's consumption of rayon staple in 1930 was roughly six million (6,000,000) pounds and in 1940 was approximately one billion three hundred fifty million (1,350,000,000) pounds.

There are many reasons why rayon staple has expanded so rapidly. One of these is that rayon staple has the ability to blend readily with all known fibers and therefore offers almost unlimited possibilities in fabric development. In continental Europe its expansion has been due in part to legislation requiring various percentages of rayon staple in certain fabrics. In the United States where all fibers are on a competitive basis, the expansion of rayon staple has been due entirely to the merits of the product. There is every reason to believe that this increase in consumption of rayon staple will continue for some time.

To date approximately 85 per cent of the rayon staple sold in America has been used on the cotton system of yarn manufacturing. While the woolen and worsted manufacturers have consistently increased their consumption of rayon staple it is indicated that the cotton system will continue to be the leader for some time to come. This is primarily because of its advantage in yarn manufacturing cost and the progressive attitude of most of the cotton manufacturers.

In the past ten years, through research, the rayon manufacturers have made much progress in improving the quality and mill processing characteristics of rayon staple. With the large amount of research work being conducted by the rayon manufacturers we can safely forecast further improvements in the character and quality of rayon staple, as well as the development of new types of staple designed for special uses and needs.

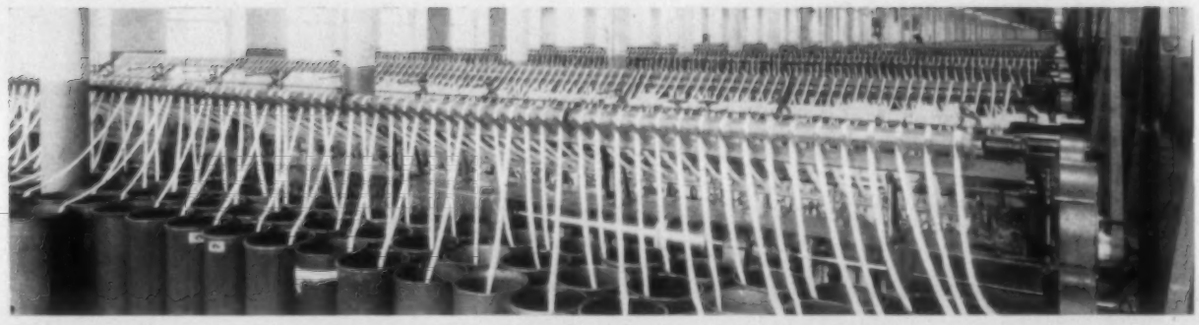
*Paper presented at Rayon Symposium, N. C. State College, during week of May 5-9.

At present there is a definite trend toward the use of 3 and 5.5 denier staple in the longer lengths (2½ inches-3 inches) on the cotton system. The use of the longer staple results in increased yarn strength and a more worsted like fabric. The use of 2½-inch staple on the conventional cotton equipment is not entirely satisfactory from a processing standpoint. When using 2½-inch staple it is necessary to use the floating middle top roller method of drafting or to eliminate one set of drafting rollers entirely on the drawing and fly frames in order to take care of the length. It is the concensus of opinion that the average cotton mill will not be able to handle 3-inch staple on a production basis and therefore must revamp its present equipment or purchase new equipment if they wish to process staples longer than 2½ inches.

The textile machinery manufacturers are making great strides in adapting their machinery to process rayon staple varying in length from 1½ inches to 3 inches. Some of this new equipment for carding, spinning and weaving of rayon staple was exhibited at the Greenville Textile Show. The outstanding trends in the yarn manufacturing equipment which the machinery manufacturers are developing for the longer length staples on the cotton system are:

Pickers

Most of the machinery manufacturers and mills agree that the sandwich method of blending fibers is the safest method to use prior to picking. The main differences in available one-process pickers for 2½-inch to 3-inch staple are in the use of the Kirschner beaters versus solid upstroke pin beaters and the intermediate hopper feed controls versus blending reserve controls. It is claimed that the solid upstroke pin type of beater does not damage the long fibers to the same degree during picking as the downstroke Kirschner type. It is also claimed that the blending reserve type offers better control of the fibers and produces a more uniform lap. Both types of pickers are now in use and time will tell which is the better type.



The machinery manufacturers are continuing to work on their pickers with the view of obtaining better control of the fibers and to make the various parts of the picker more accessible to cleaning.

Cards

Considerable work is being conducted by the various machinery producers on different methods and types of cards for carding rayon staple and blends of rayon staple and wool having a length of 2½ inches to 3 inches.
pers replacing the standard top flats. The wool type cards of widely different designs. Others have modified cotton cards equipped with three (3) sets of workers and strippers replacing the standar dtop flats. The wool type cards are designed for Bramwell feeds and the modified cotton card for using picker laps.

It is claimed that the wool card and also the modified cotton card with workers and strippers will handle the coarse long staples better and with less fiber damage than the standard cotton card. The fact that no top strips are taken out on these cards is also an advantage from the standpoint of decreasing waste and uniformity of blends. The wool cards have an advantage over the modified cotton cards in volume of production per hour but this is somewhat nullified by their increased cost. The main disadvantage of the worker and stripper type of card is that there is no means of eliminating neps which may be formed or which may be in the stock. While this type of card may handle the long coarse staples better than the standard cotton card the carding of 1.5 denier 1½-inch staple is not as satisfactory as that accomplished by the standard cotton card.

While all the above cards are interesting and offer many possibilities for coarse long length fibers none have been in use, in connection with the cotton system, in sufficient volume or length of time to definitely prove their value.

Each of the producers of cotton cards can supply standard cards with certain modifications which should help in processing the longer staples. The esssential modifications are long nose feed plate, special pulleys to permit running the lickerin at 150 to 165 R.P.M. rather than at 425 R.P.M. and in some cases special types of clothing which do not load up as readily as regular clothing on the cylinder, doffer and top flat.

Drawing

All the machinery producers apparently agree that cushioned type top rollers on the drawing frames give superior results to metallic top rollers. They also agree that large diameter rollers are desirable. The major differences between the available drawing frames are:

(1) The standard type four-roller drawing frame built with wide stands designed for long staple.

(2) The five-roller controlled draft drawing frame which is fed from a lap made on a sliver lap machine.

(3) The four-roller Bi-coil drawing frame is fed from cans and delivers two slivers per can. Two or three processes are used, depending on the results desired. The use of two slivers per can reduces the number of cans needed at the second drawing and slubber.

Long Draft Roving

A number of different types of drafting arrangements are available on the long draft roving frame. which takes the drawing sliver and produces a roving ready for spinning. The essential differences are roller drafting versus a combination of rollers and double apron drafting. Many claims are made for each type but the new frames, designed for 1½-inch to 3-inch staple, have not been in use long enough to give an accurate evaluation of each type. The older long draft frames, for short staple, utilizing the double apron type requires more cleaning. If the frames are not adequately cleaned bad work may result more quickly than on the roller type of drafting. Large diameter front rollers are recommended for all types of roller drafting frames.

Long Draft Spinning

The major differences between the available long draft spinning frames designed to handle 1½-inch to 3-inch staple are:

(1) The double apron type of drafting.

(2) The single apron type with one or more buffer top rollers.

(3) The four-roller type employing two buffer top rollers.

Each of the various type frames are being tested in the trade and more data will be available later as to their performance.

All of the cotton type machinery manufacturers are employing the long draft principle throughout their new equipment in order to shorten and cheapen the yarn manufacturing process. These developments are the direct result of the economic pressure for superior products at a lower manufacturing cost.

It is generally accepted that the manufacturing cost of spun rayon yarns by the cotton long draft system is the

cheapest of all the systems used for producing medium count yarns suitable for dress goods, suitings, etc. In order to make the saving in yarn manufacturing cost by using the long draft system and to produce comparable fabrics to those produced from yarns made on the conventional systems, most manufacturers agree that the foundation work at the picker and card must be greatly improved. In other words, as the doublings are reduced and the drafts increased, the uniformity of the lap, card sliver, and roving from inch to inch and yard to yard must be improved to compensate for the shortening of the process. The machinery manufacturers are attempting to accomplish this through better control of the fibers at each stage during yarn manufacturing. We believe that very definite progress has been made along these lines.

Mill Processing Problems

There naturally have been many problems to overcome in the mill processing of the millions of pounds of rayon

staple which have been used in the United States in the past ten years. We will discuss a few of the main problems encountered and some of the methods used to correct them.

Humidification, Picking and Tinting

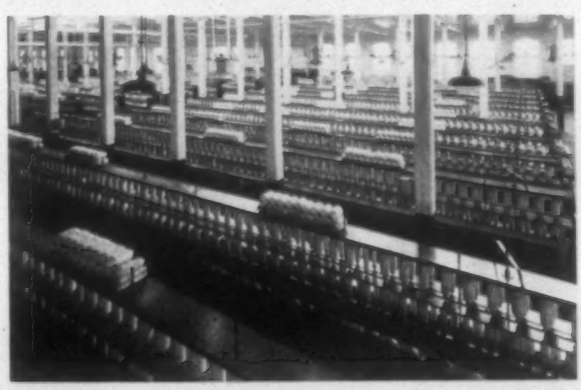
For a number of years the importance of adequate relative humidity (55% to 65%) in the opening, picking and card rooms, as well as throughout the other areas of the mill, was not recognized. In fact, a few mills still have not recognized its importance. During this time the mills experienced much trouble from static, splitting laps and poor handling of the laps at the pickers and cards. Much trouble was also experienced with web breakage and poor web formation at the card. The failure to recognize the importance of humidification at the pickers and cards was possibly influenced by the fact that cotton, with its natural oils and waxes, does not require humidification during these operations. In fact, the presence of 55% to 65% relative humidity retards the cleaning of cotton rather than helps it. Because of this, very few cotton mills were equipped with humidification in the picking and carding departments. When the importance of humidification was recognized and the mills made adequate provisions for humidification and conditioning of the staple prior to picking, the problems of static and splitting laps were greatly reduced. We wish to point out, however, that excessive humidity can be very dangerous, the mills must use judgment in meeting their requirements.

In recent years the rayon manufacturers have been able to further reduce static and splitting laps at the pickers and cards through various changes in the methods of manufacturing the staple. It is now possible to eliminate static splitting laps and web breakage through the use of the proper humidity and the use of top and bottom lap split preventer fingers on the pickers.

Rayon staple is being handled successfully on both the conventional cotton pickers and on the one-process picker without major changes. All types of beaters have been tried under various conditions. The Kirschner type beater is the one in most general use. Care and judgment must be used in setting the Kirschner beater to the feed rolls. If the setting is too close, trouble will be encountered with neps.

Since rayon staple is supplied in a reasonably well opened state free of foreign matter, no cleaning is required. The main object of the picker in the use of rayon staple is to prepare the staple for carding by thoroughly opening the staple and producing a uniform lap. We cannot over-emphasize the importance of lap uniformity.

In the past few years the number of blends of rayon, wool and acetate or other fibers has increased to the point that the mills must use some adequate means of identification. Various methods of tinting the stock before or after the blends have been made, are available. The tinting method in most general use is by means of spray heads in the hopper opener or bale breaker prior to picking. It has been found that a great improvement in the uniformity of the tinting can be made by using two hoppers in tandem and applying one-half of the tint in the first hopper and one-half in the second hopper. The stock is then generally blown by air to a storage bin and allowed to age a few hours before using. The mill should use as little tint as possible for identification in order that the effectiveness of the finish which the rayon producer puts on its staple may not be impaired. If excessive



quantities of tint are used troubles of various types are encountered.

Carding

The main problems which have been encountered with rayon staple during carding have been: lap splitting, web breakage, loading of the lickerin and cylinder. All of these problems have been materially influenced by the presence or lack of adequate humidification. If the relative humidity is much lower than 55%, trouble usually results. When the cards are dull or the wires become damaged loading usually results. We have experienced loading of the cylinder when an excessive amount of certain types of tinting solutions have been used. The loading of the lickerin can generally be eliminated by reducing

(*Continued on Page 54*)

Eastern Carolina Group Discuss Mill Problems

THE Eastern Carolina Division of the Southern Textile Association held its spring meeting in the Textile School of North Carolina State College, Raleigh, N. C., on Saturday morning, April 26, 1941, being called to order at 10 o'clock by the Chairman, W. H. Miley, Jr., superintendent of No. 2 plant of The Erwin Cotton Mills Co., Erwin, N. C.

A stenographic report of the meeting follows:

Chairman Miley: Gentlemen, I am very glad to see so many here this morning. To be perfectly frank, from what I had heard I did not expect such a large crowd, because I know a good many of the mills are working on Saturday now.

At our last meeting this group voted to adopt a resolution indorsing the program that is going to be undertaken soon by the Textile Foundation to employ a man for research in the cotton mills. At this time I am going to ask David Clark if he will not give us some information and describe that program to us.

David Clark, Editor, Textile Bulletin, Charlotte: The program is not very definite at the present time, gentlemen, except that we have $5,000 per year appropriated by the Textile Foundation for research in the cotton mills. It is to be a joint project of the Southern Textile Association, the Arkwrights, and the Textile Foundation. So far we have not been able to secure the man who is to take charge of the program. We have endeavored to secure one, who would be excellent; but he is under civil service and is reluctant to undertake it unless he can retain his civil service status. The Textile Foundation has authorized us to secure the man.

You will remember that a few years ago the Arkwrights undertook to conduct tests in the mills. In order to become a member of that organization a man had to make a test in the mill and, when it was completed, had to file the results with the Arkwrights. If the committee in in charge found that the test had been made according to the regulations, the man was admitted to membership. The trouble was that it took too much of the time of Mr. Dilling, who is a very busy man. Under this proposed plan, the tests will be made under the supervision of this man who is to be employed. He will also endeavor to have similar tests made in other mills, so that the results may be compared. I hope one of the first tests to be made will be on the cause of variation in numbers. I have made the statement, and I make it again, that I do not believe there is a mill in the South making 20s, 30s, and 40s yarn that does not have a variation of at least four numbers. We have to begin in the lap room and find the cause of variation in the length of the lap.

As I said, we have $5,000 with which to do this work. We shall pay the man $3,600, and in some way we have to get his expenses out of the remainder. I have just come from Augusta, where I presented the subject to the American Cotton Manufacturers' Association and asked their support. To my surprise, they turned it down. I was surprised to find, in talking with some of the leaders, that there does not seem to be much interest in research. Anyhow, we have to work it out and get enough money for the expenses of that man. When we do, we want the Eastern Carolina Division to work with us in making tests. The $5,000 annual appropriation will continue for five years, and in that time we ought to be able to do something worth while in textile research.

Chairman: Mr. McDowell, will you read the proposed resolution?

V. E. McDowell, Overseer of Carding, Rosemary Mfg. Co., Roanoke Rapids: This resolution was drawn up by T. M. Mullen, of Roanoke Rapids. It reads as follows:

"The Eastern Carolina Division of the Southern Textile Association wishes to go on record as indorsing the plan of the Southern Textile Association, with the aid of the Textile Foundation, to employ a research engineer to supervise the conducting of practical mill tests in the cotton mills of the nation."

Mr. Chairman, I offer that resolution.

A motion to adopt the resolution was seconded and, on being put to vote, was carried.

Chairman: At this time I shall appoint a nominating committee to bring in the names of new officers for this Division. I appoint on that committee Mr. Marley, D. F. Lanier, superintendent of the Oxford Cotton Mill, Oxford, and J. E. McGee, assistant superintendent of the Rosemary Mfg. Co., Roanoke Rapids. These three gentlemen will please confer sometime during this session and be prepared to report just before we adjourn.

Mr. Royal, have you any announcements you wish to make?

B. Ellis Royal, Secretary of the Southern Textile Association, announced that the annual meeting will be held at Myrtle Beach, S. C., June 13th and 14th.

Chairman Miley: I am going to ask Mr. Gilliam to take charge of the meeting now and lead the discussion.

Compressing Card Sliver

George Gilliam, Supt., Sterling Cotton Mills, Franklinton: Gentlemen, the first question we have for discussion is the advantages or disadvantages of compressing card sliver. Probably most of you already have had somebody sell you this little invention that goes on the condenser

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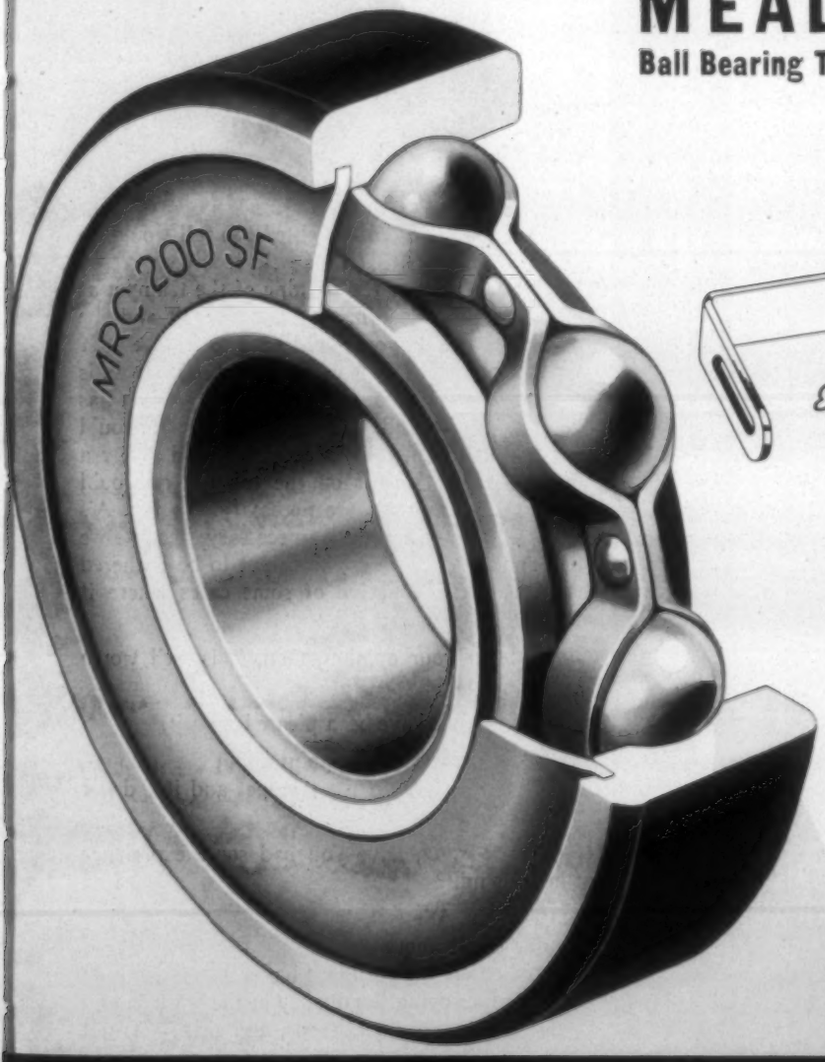

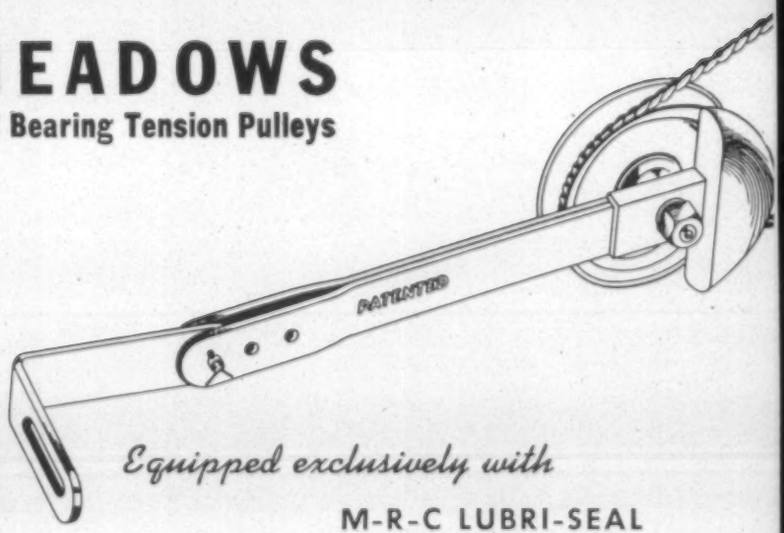

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roll and you know what it is. Let's discuss it first from the standpoint of the time gained in doffing. Mr. A, can you tell us anything about that?

Mr. A.: The makers of this gadget say it saves in doffind, giving more time for cleaning and oiling, etc. They also say there is less piecing-up for the next process, which saves in time, labor and waste. They also list a saving in cans and a saving in floor space by using fewer cans. We have tried some of these things, and our finding right now is that the device does not help the work any but it does not do any harm. Where you have a large number of cards, if you lengthen your doffing time, of course, you have a big saving there.

Mr. Parks is our artist, and he has drawn a picture of this thing on the blackboard there, so anyone not familiar with it can see what it is. It consists, of course, of a wood bearing that lies right up on the calender roll and a spring, with a bracket on it to hold the spring down. I might say we are getting about 16 per cent more sliver in the can—or, rather, 16 per cent more in the running time. That would not run up to exactly the same, of course. We have lengthened our doffing time from 1½ hours to 1¾ hours.

Mr. Gilliam: That is a gain of 15 minutes.

Mr. A.: Yes, sir. I do not know exactly how much we compress it.

Mr. Gilliam: Is there a device on there to regulate the compression?

Mr. A.: No. What we did was to have some blocks made, to cut down the compression somewhat. We felt that the spring we had was giving us too much, and we cut down the bearing a little.

I have a few charts I made on the results of tests, and if any of you would like to see them afterwards I shall be glad to show them to you. We probably have not time for me to show them here. We cannot tell any difference in our work.

Mr. Gilliam: So far as you know, then, it has not affected the quality of your work?

Mr. A.: No, sir.

Mr. Gilliam: Is there any claim made for it other than it lengthens the doff and save in time and space?

Mr. A.: I have seen an article in which the writer claimed that it helped the quality of his work. In the articles I have seen, if the writers said it did any damage it was in compressing the sliver too much.

Mr. Gilliam: How much poundage did you get in your cans, Mr. A, before and after using that device?

Mr. A.: I don't know the exact poundage, Mr. Gilliam.

Mr. Gilliam: It would run in proportion. You got 15 or 16 per cent more, you say?

Mr. A.: Yes, sir.

Mr. Gilliam: Does anyone want to ask Mr. A any questions.

Mr. B.: I should like to ask if he changed his roll settings.

Mr. A.: We tried that. There was some discussion as to whether, if you lengthen your roll settings, it would do any good. We found it did not make any difference one way or the other. For instance, I have a couple of charts here on roll settings. That is five rolls of drawing, and one setting we tried gave a little over 24 per cent variation on the sliver-testing machine. The same test on the slubber gave almost 37 per cent variation. A different roll setting on the drawing gave a variation of 26.40 per cent and on the slubber 39 per cent. There is very little difference. Of course, we already had a rather wide setting.

Mr. Gilliam: Is there anyone else who has had any experience with that and would like to talk about it?

Mr. C.: We have those sliver compressors and are right much pleased with them. So far as the card is concerned, of course, the device cannot hurt the quality of the goods produced at the card, because it is already cleaned, etc., before it passes through this extra compression. The same objective could be attained by having a heavy enough top roll at the calender. It is more convenient to get it with this spring, because it is so much smaller than the roll would have to be.

Mr. Gilliam: The spring, of course, would give some if a lump should come through.

Mr. C.: Yes, sir, but a self-weighted top roll would do the same. One danger is that if the sliver is compressed too much it is too small for the opening of the trumpet at the card. If the sliver is compressed too small and the trumpet is then too large, you would have to change your trumpet at the card. The next danger point, of course, is at the drawing. The sliver being more compressed, it has more tensile strength; and that tensile strength would have to be broken down, if it is excessive, and either a wider setting or more weight on the top rollers would have to be considered, if it were necessary. In Mr. A's case and my own we did not find it necessary, because we already had enough break draft there not to be bothered with that. But I can conceive of some cases where it could be.

Mr. Gilliam: In your opinion, then, it is well worth while?

Mr. C.: Yes, sir, we have been pleased with it.

Mr. A.: Referring to Mr. C's point about the trumpet, we tried reducing the hole in the trumpet and it did not help us any.

Mr. Gilliam: Mr. D, have you had some experience with that in your mill?

Mr. D.: Yes, sir. We put these condensing springs or gadgets on our cards about five or six months ago. We have them now on all the cards we have. We did not do it in the hope of improving the quality of the work in any way. We put in ten additional cards, and there was not enough for a job. We wanted to fix it so that one man could handle the job as it had been running, with these ten additional cards. To do that, we put these gadgets on the calender rolls on our cards and we increased the amount of stock about 18 to 20 per cent, and increased the running time in proportion, between doffs.

Mr. Gilliam: What card sliver do you make?

(*Continued on Page 43*)

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920,142 Bales of Cotton Used in April

Washington, D. C.—Cotton consumption during April totaled 920,142 bales compared with 623,098 bales in the same month last year, according to preliminary statistics made public by the Census Bureau, Department of Commerce. Consumption for nine months ended April 30th totaled 6,995,238 bales compared with 5,953,999 bales in the nine months period a year ago.

Cotton on hand April 30th in consuming establishments amounted to 1,933,507 bales compared with 1,470,527 bales on April 30th last year, and in public storage and at compresses for the two periods there were 12,374,839 bales and 10,732,290, respectively.

Of total consumption in April this year 775,956 bales were used in the cotton growing States, 115,985 in New England States, and 28,201 bales in all other States. April consumption includes 45,000 bales distributed by the Surplus Marketing Administration through various cotton mattress programs.

Linters consuming during April totaled 119,639 bales, compared with 91,896 bales in April last year.

Exports in April amounted to 74,000 bales valued at $4,345,000, compared with 97,000 bales valued at $5,813,000 in March and 345,000 bales valued at $20,653,000 in April, 1940, according to an analysis of the export statistics by the department.

Exports for the nine months, August, 1940, to April, 1941, totaled 904,000 bales valued at $50,112,000, compared with 5,695,000 bales valued at $315,494,000 for the corresponding nine months of 1939-1940, a decline of 4,791,000 bales or 84.1 per cent in quantity and a decline of $265,382,000 or 84.1 per cent in value.

"A One-Year Textile Course for College Graduates"

The Textile Foundation of Washington, D. C., has announced the availability of a pamphlet entitled, "A One-Year Textile Course for College Graduates."

Authored by Thomas R. Taylor, former Assistant Director of the Bureau of Foreign and Domestic Commerce and teacher in business schools and universities, the 26-page pamphlet, based on a nation-wide survey, emphasizes the need for inauguration of a special one-year course for college graduates in textile technology and economics.

"Industry leaders are almost unanimous in the conviction that more college men should be fed into the industry," Mr. Taylor says, and points out that they feel, "The one-year course may be an ideal method of recruiting."

It is indicated that in the marketing or manufacturing of cotton textiles alone, several hundred such college graduates annually could be used to good advantage.

A survey of the questionnaires sent to college graduates now employed in the industry shows that 77 per cent would have taken such a course had it been offered at the time of their graduation. These men report lack of training courses in textile mills and houses, and therefore, an additional handicap imposed on the liberal arts graduate who enters the industry.

The survey also reveals that deans of textile schools view the one-year course as a stimulating educational venture and that other educators favor the plan on both theoretical and practical grounds, in that it keeps pace with modern educational methods and would serve to develop managerial talent.

The industry's trade associations and trade journals are enthusiastic, since the effort would tend to raise the standard of executive raw material within the industry.

In his report, Mr. Taylor draws the following conclusions:

1. There is sufficient evidence of the need for establishing one-year course to justify one or more textile schools in adding it to their curricula. The demand arises particularly from executives within the industry who are anxious to increase the ability of the younger personnel to contribute to the pressing managerial problems of the times.

2. In view of the nature of the demand, it would seem logical that the course should give primary emphasis to managerial work rather than technical education.

3. To be worked out successfully, the course must be offered at some central location and must be well planned in order to justify the expenditure of a full post-graduate year. The students, teachers and outside lecturers must be carefully chosen, and the course must be creative and stimulating throughout in order to attract top-notch men. Especial effort should be made to place graduates in the industry and to follow their work from year to year.

The pamphlet may be obtained without cost by addressing a request to the Textile Foundation, Commerce Building, Washington, D. C.

The Textile Foundation was organized for scientific and economic research for the benefit and development of the textile industry and its allied branches, including raw materials. The directors of the Foundation are: Franklin W. Hobbs, of Boston, chairman; Frank D. Cheney, Manchester, Conn., treasurer; Donald Comer, Birmingham, Ala.; the Secretary of Agriculture, Claude R. Wickard; the Secretary of Commerce, Jesse H. Jones, and Edward T. Pickard, secretary.

Commission Appointed To Choose N. C. Textile School Site

Raleigh, N. C.—Governor Broughton has appointed a seven-man commission to select a site in the Piedmont section of the State for an institution to be known as the North Carolina Textile Institute.

The commission was authorized by the 1941 General Assembly, under a bill introduced by Representative J. B. Vogler, of Charlotte. After the site is selected, the Governor and Council of State are authorized to allot $50,000 from the emergency and contingency fund for establishment of the institute.

General purpose of the institution will be to give training to persons 16 years of age or older in textile work.

Named to the commission were Lieut.-Gov. R. L. Harris, of Roxboro, Speaker O. M. Mull, of Shelby, Representative C. A. Rudisill, of Cherryville, Vogler, Charles A. Cannon, of Concord, F. B. Bunch, of Statesville, and Prof. Thomas E. Browne, director of the Division of Vocational Education in the State Department of Education.

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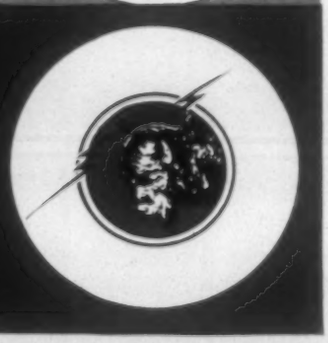

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Wage and Hour Regulations Discussed at Reidsville Meeting

THE regular spring meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association was held in the City Auditorium, Reidsville, N. C., on Saturday morning, April 19, 1941. The Vice-Chairman of the Division, T. C. Pegram, superintendent of No. 3 Plant of the Erwin Cotton Mills Co., Cooleemee, N. C., presided.

A stenographic report of the meeting follows:

Chairman Pegram: The meeting will come to order. We shall have a word of welcome from W. S. Mason, secretary of the Reidsville Chamber of Commerce, at this time.

W. S. Mason, Secretary, Reidsville Chamber of Commerce: Mr. Chairman and Gentlemen, it is with definite pleasure and pride that I welcome you to Reidsville today. In these days, when nations are tearing at each other's throats, when we American people know not what lies ahead of us, when the Administration at Washington is struggling to prepare us for the future, it is well for us to take stock and realize that American industry has in the past met and is today meeting the test. Congress may be spending billions of dollars; we may be preparing a tremendous Army and Navy; but in these days of mechanized equipment it is industry, gentlemen, that is the backbone of national defense. Battleships and tanks are necessary, cruisers and motor vehicles, guns and munitions; but back of them all stands industry, in whatever field or in whatever line of it you happen to be engaged. It is with pride I mention this today, because of the pride which I personally have in American industry and its part in our national defense program.

On behalf of the City of Reidsville I extend to you a most hearty welcome for your gathering here this morning. Reidsville is the only city in Rockingham County, a city of a little over 10,000 inhabitants. It has grown in the last ten years a little over 52 per cent, which is quite a growth. Located, as we are, in the center of a vast textile area, Reidsville about equally divides its interests between textiles and tobacco. As the home of the Lucky Strike, Reidsville obviously is interested in tobacco. It is a good thing to have such a plant, because in good times and bad times people continue to smoke.

We extend to you a cordial welcome and trust your meeting here will be pleasant as well as interesting and helpful. The latchstring of this community is out all the time, and we hope that we may have the pleasure of welcoming you again in the future.

Chairman Pegram: Mr. Mason, we thank you for your welcome.

We will now have the report of the nominating committe, which consists of S. H. Holder, Mr. Jennings, and W. Lexie Davis. Mr. Holder, will you make the report?

S. H. Holder, Asst. Supt., Consolidated Textile Corp., Lynchburg, Va.: Mr. Pegram, Mr. Jennings is not here this morning. The nominating committee offers the following nominations:

For Chairman, T. C. Pegram.

For Vice-Chairman, Howard Barton, Marshall Field & Co., Spray, N. C.

For Secretary, J. O. Thomas, Marshall Field & Co., Spray, N. C.

For Member of the Executive Committee, J. E. Waverly, Edna Cotton Mills, Reidsville.

Chairman: Thank you, Mr. Pegram.
Are there any nominations from the floor?

A Member: I move that the nominations be closed and that we adopt the report of the Nominating Committee.

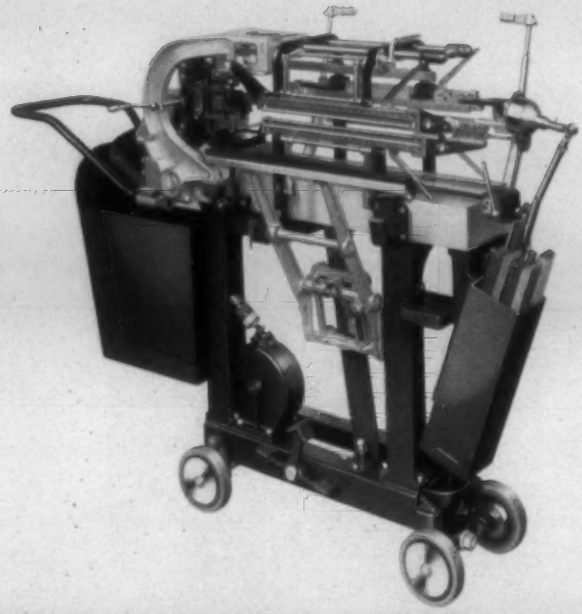
Motion seconded.

Chairman Pegram: Mr. Holder, I will ask you to put the motion, since both Mr. Thomas and I are on the ticket.

The question was put by Mr. Holder, and the motion to elect as officers the persons named by the Nominating Committee was adopted.

Chairman: As you all know, gentlemen, the purpose of the division meetings of the Southern Textile Association is consideration of and instruction in some of the problems that face us every day. One of the greatest problems that we mill men have today is being able to operate under the three different laws that affect us, namely, the Walsh-Healey Act, the Fair Labor Standards Act, and our State laws. Due to the difficulty that we have in interpreting these laws, your Executive Committee decided to ask the man whose duty it is to see that they are obeyed to address us this morning.

I know of no greater compliment that could be paid any man than to say that he was appointed to an office by one of the greatest Governors that North Carolina has ever had and then, at the expiration of his appointive term, was elected to that office by a very large majority. That is what I can say about our speaker this morning.



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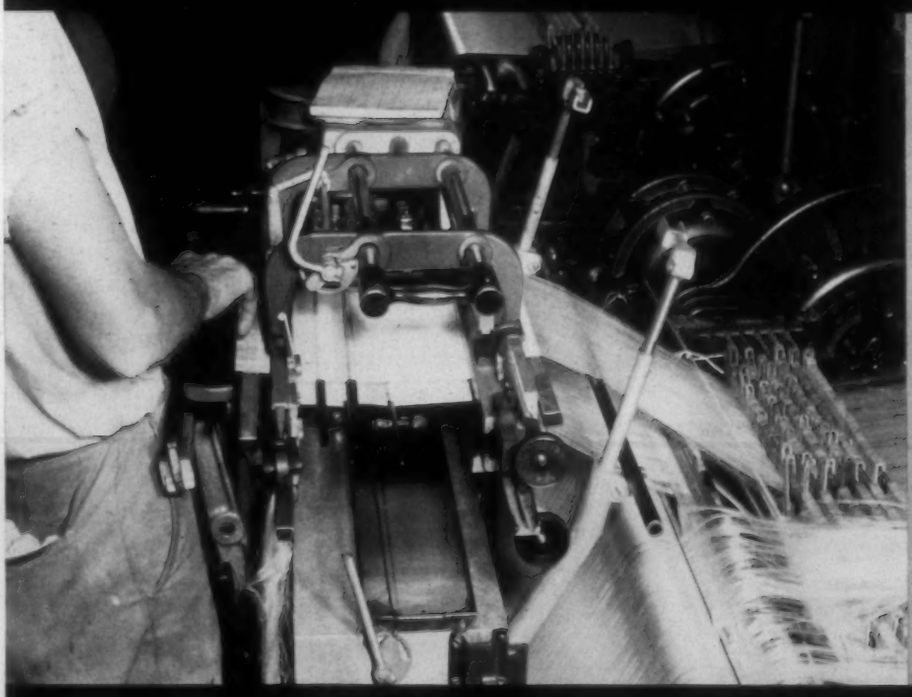

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It now gives me great pleasure to present to you Forrest H. Shuford, Commissioner of Labor for the State of North Carolina, who will talk us to us regarding the labor laws of our State and of the United States. Mr. Shuford.

Labor Laws Discussed By Forrest Shuford

It is a pleasure for me to be able to attend this meeting today and to talk, I hope, not to you but with you on some of the problems that are mine as well as yours.

In the first place, if you men do not already know what the State Department of Labor is and what its purposes and functions are, I want you to know all about it. Its function is to serve the people. The people may be unorganized or may be organized; they may be laborers in an industry or they may be employers. We serve employers frequently. We save them a great deal of money by suggesting safety methods or improvements in methods of operations which are helpful to them. We also do our very best to improve working conditions so that the employees in your plants may have a better and a fuller life. We are set up to enforce the labor laws, and we try our best to enforce them, and with the limited means at our command we do enforce them. Most labor laws, gentlemen, in the long run, are laws which are of value to the employer as well as to the employee. Sometimes that seems questionable, but unless a labor law is of value to the community as a whole it is not a good law, and bad laws will not stay on the statute books. They may remain for some time but will eventually be repealed.

The function of the Labor Department, I repeat, is to enforce the labor laws, and to do that we make inspections. The type of inspection with which you are most familiar is factory inspection. You see our factory inspectors in your plants occasionally, though not as frequently as we would like. And not as frequently as you would like to see them, because I have employers tell me that they wish the inspectors could get around more frequently. They give you valuable information. We make elevator inspections and boiler inspections. Incidentally, I might say that as a result of elevator inspections you do not see as many reports of people being killed in elevators today as you did in the past. The same is true of boiler inspections. Many small plants, sawmills and drycleaning plants did not have boiler inspections until we began it just a few years ago, and now you do not read of so many explosions in small sawmills as you did before we began inspections. We also make safety inspections of mines and quarries. Those are very hazardous industries. We have prevented many accidents and saved many lives in that field; not as many as we would have liked to, because several accidents have occurred right recently in one big operation. I always feel bad, and somewhat a sense of guilt when a person gets killed in industry, because I feel we have not done our job as well as we should.

Another of our functions is to compile statistical data. Most of you send us data on your plants, regarding hours worked, wages paid, and number of employees. Employers frequently want that information compiled for their industry. Your industry has given us excellent co-operation and we are able to compile valuable statistical data for the textile industry. In the field of statistics we cooperate with the Bureau of Labor Statistics of the United States Department of Labor.

Another very important function of our department is to maintain friendly and close relations between management and labor. We make every effort to see that both management and labor get a square deal and that misunderstandings which arise are ironed out. In this State (not entirely due to the work of our department, but it is one of the contributing factors) we have a better record with respect to labor disputes and strikes than is true of the majority of other highly industrialized States.

We have a system of apprentice training. That is not of so much interest to you, perhaps, except in your machine shops or in departments which require training over a long period.

In the Department of Labor we also have the Veterans Service Division, and through that division we assist the veterans of all wars in prosecuting their claims for benefits to which they may be entitled under Federal laws.

So that, in a few words, is what the Department of Labor is; and what it strives to do. Its work is chiefly in connection with the industries of the State; with the working people in those industries and the employers in those industries.

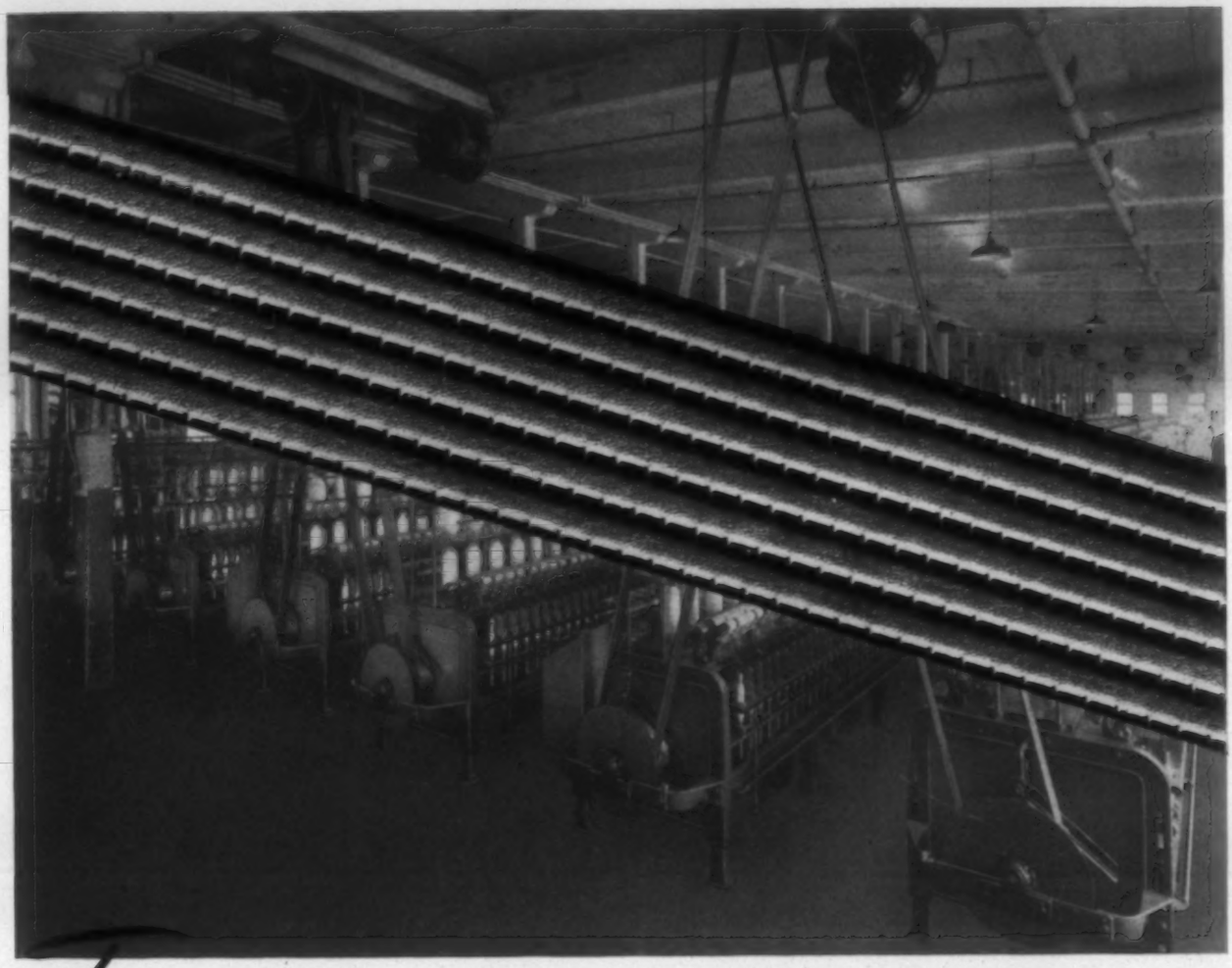
I know that the chief thing I am supposed to do is talk about the labor laws rather than about the Department of Labor. At the present time they are of great interest to you; and, as your chairman mentioned, there is somewhat a complexity of laws. You sometimes get confused, perhaps. I wish that there were more uniformity in these laws. The three hour laws to which Mr. Pegram referred I assume are the State law, the Fair Labor Standards Act, and the Walsh-Healey Act.

As we think about these these laws we may wonder why we have them since we have lived and worked many years without such restrictions. Well, times change and conditions change. The situation reminds me of the woman who said to her daughter: "Why, daughter, when I was a girl we never thought of doing such things." The girl replied: "Well, mother, don't you wish you had?" We had no restrictions when the country was less highly industrialized, but perhaps we would have been better off if we had.

I have had employers tell me that except in times of extreme emergency they do not want to work employees more than 40 hours a week; that production is better than when they worked the longer hours of 48 or 50 or 55 hours a week in textile plants. So maybe we are better off. We have improved our methods of manufacture and the efficiency of our machines, and these things have contributed to increased production with shorter hours. But one of the biggest contributions which shorter hours has made to increase production is by increasing the efficiency of the operative. No one can work extremely long hours and be efficient. When I first started working in a textile plant at the age age of 15, working 60 hours a week, the work load was light. If the work load had been as heavy as it is now one could not have stood it for the 11 or 12-hour day.

We do have a complexity of laws with which to comply. However, it is important for industry to comply strictly with whatever laws there are since it gives less opportunity for complaints. Even if you can successfully evade a law, the violation tends to break down good labor relations. From that standpoint alone it will pay

(Continued on Page 46)



This belt increased Front Roll Speed

2 TO 5 TURNS PER MINUTE

The name "Houghton" has been identified with leather for 40 years. For textile strapping, packings, mechanical leathers and belting for all types of textile machines, you can't beat the Houghton trio—
VIM, VIX and OKAY

That's interesting news to the man who wants greater spinning frame production . . . . and at no increase in cost. More turns per minute than with belts formerly used, is a common experience when Houghton's treaded belts are installed.

The patented treaded surface, exclusive with Houghton, gives better pulley grip, truer running on the pulleys. The exclusive tannage means longer life, softer grain, higher coefficient of friction —more power delivered with less slip.

Mill men interested in these claims for extra front roll turns are invited to write for sample and full details.

E. F. HOUGHTON & CO.
Third & Somerset Streets, Philadelphia
1301-05 W. Morehead Street, Charlotte

TREADED *Houghtons* **LEATHER BELTING**

Cotton Mill Production Formulae

By John T. Kersey

Written largely for use by the beginner, or mill worker interested in advancement, the following production information may prove of interest to any person in the mill. Some of Mr. Kersey's methods and computations are unorthodox, and may invoke some lively discussion.

Spooler Production

To obtain a good average production per spindle of the spoolers, a capable and efficient operative is of prime importance and her work should not require attending too many spindles. The banding of the spindles is another important factor. They should be made of good material and tied on properly; one band should not run more than 4 spindles. The bobbin holders should be set at an angle that puts the least strain on the thread to avoid excessive breakage and loss in production.

The spooler, or thread guide, is supposed to catch all the gouts and other defects which of necessity breaks the end down and stops production. To avoid this the only remedy is to make yarn without abnormal defects.

The thread guides should be set with a gauge and the setting should not be too close for the number of the yarn being spooled.

Spooler Guides

Gauge Formula

A very good formula for determining the gauge or setting of spooler guides for warp yarns containing standard twist and uniform diameter is

$$\frac{1.0000}{\text{Threads per inch}} = \text{thousandths of an inch}$$

The threads per inch or the number that can be laid in a space of one inch without piling is found by multiplying the square root of the number by 26.1.

Example: What should be the setting for guides when spooling number 23s warp yarn?

$\sqrt[2]{23.00} \times 26.1 = 125$ threads per inch. $1.000 \div 125 = .008$.

Lumpy or very uneven yarn would probably require a more open gauge, but the better way would be to correct the unevenness in the yarns.

Warper Production

As the beam revolves by being in contact with the surface of the cylinder, the yards per revolution will be the same from empty to full beam. The speed of the cylinder is 30 to 50 revolutions per minute, when spools are used in the creels, but can be much greater when the yarn to be warped is wound on cones or tubes and pulled off from

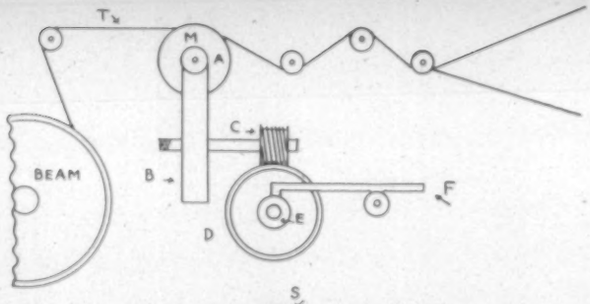


Fig. 8

the end. The diameter of the cylinders the beam rests on are usually 18 inches diameter. This would make the yards per revolution=

$$\frac{3.1416 \times 18}{36} = 157$$

and the yards per 100 revolution 157.

Assuming the speed of the cylinder 45 r.p.m., the yards per day of 8 hours with no stoppage for any cause would be $1.57 \times 45 \times 60 \times 8 = 33912$. Assuming the yarn number is 24s and the total stoppage 35 per cent, the pounds per 8 hours per warper per end=

$$\frac{33912}{840 \times 24} \times 100 - 35 = 1.682 \times 65 = 1.09+$$

If the ends per beam total 500 the pounds per day per warper $= 1.682 \times 500 = 841$.

Pounds Per Beam

Beams Per Day

As it takes from one to two hours to doff creel and start up again after filling a beam, depending on the number of creeler girls, the production should be determined for pounds per beam and beams per day. By referring to Figure 8 it will be seen that the thread T passes over the measuring roll M, thence onto the beam. Every revolution of the screw worm e, puts one wrap of thread on the beam. The yards per wrap is usually 2,000 to 3,000 and the wraps per beam 4 to 8. To set the stop motion trigger f, in the 4th thread from end of screw e, when it comes to the slot s, it will fall and stop the machine and the beam will contain 4 wraps. The yards per wrap is de-

(Continued on Page 59)

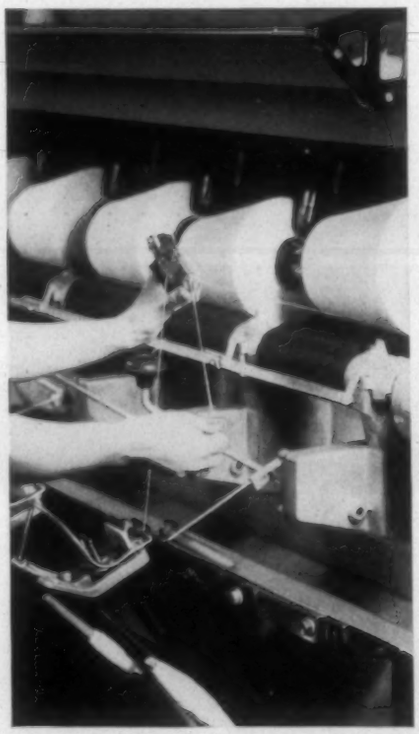
THIS IS NO. 27 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

HOW OPERATORS SHOULD START THE SPINDLE ON A DRUM WINDER (Roto-Coner*)

In changing from a slow-speed to a high-speed machine, mills often encounter new problems of operation. To help our customers get the best results with Roto-Coners,* we offer the following suggestions on how the spindle is to be started. These suggestions are based on the experience of those mills now getting the most satisfactory winding results.



(1) The first step is to remove the empty bobbin and place it on the automatic conveyor. Sometimes, several empty bobbins can be removed at once.

(2) From the supply shelf conveniently located above the winding spindle, the operator picks up a full bobbin and "readies" it for winding. This is done by unwrapping the spiral of yarn from the outside of the bobbin and winding it around the fingers of the right hand. The tail end of yarn at the base is also broken off to prevent tangling with the running end when the bobbin gets small.

(3) The operator places the full bobbin on the supply spindle with her left hand.

(4) At this point, many mills require the operator to run her finger over the face of the Slub Catcher to remove any small accumulation of lint.

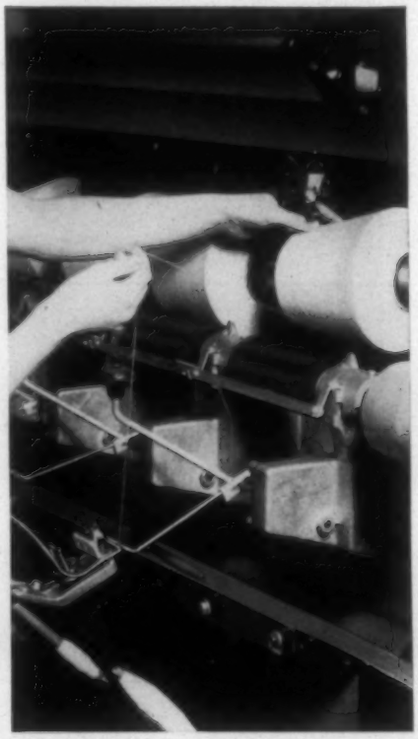
(5) Even though the Slub Catchers are self-threading, many mills consider it safer to have the operator do the "threading-up." It can be done with a flick of her right hand, and it insures that every inch of yarn will be inspected by the Slub Catcher.

(Many imperfections in knitting cones appear near the knots. This is due to the fact that, if the yarn is allowed to thread itself, there may be an instant when it is not between the blades. At 550 yards per minute (about 9 yards per second), several yards may pass without inspection.)

(6) With her right hand, the operator picks up the end on the surface of the cone. Since this end may, by now, have lost some of its twist, she winds a few coils around the fingers of her right hand.

(7) She now puts the two ends in the knot-tyer which is on the back of her left hand, and ties the knot, inspecting it carefully to be sure it is pulled tight and that the tail ends are cut off short.

(8) Holding the yarn in her right hand to prevent kinks from going into the package, she revolves the cone with the fingers of her left hand, and almost with the same motion, touches the starting handle which lowers the cone onto the drum. Since the cone is already in motion, the sudden contact with the fast-revolving drum will not harm the yarn. Then when she realizes the yarn is under tension, she allows it to drop into the groove of the traverse roll.



(9) During these operations, the right hand has collected waste yarn which was removed from the bobbin and cone. This waste should be disposed of frequently, perhaps in her apron pocket. On the Roto-Coner,* the conveyor belt is a convenient means of disposal for it is available at each spindle. Any waste on the conveyor will be carried to the end of the machine and dropped into a waste can.

See our General Catalog in TEXTILE YEARBOOK

Sherwin-Williams' Statement on N.L.R.B. Notice

A spokesman for the Sherwin--Williams Co. issued the following statement recently:

The company is in receipt of the complaint issued by the Regional Director for the Eighth Region of the National Labor Relations Board. It is a culmination of the efforts of the C.I.O. in its organizational attempts by enlisting the aid of the N.L.R.B. to try to knock down the independent unions which have for many years represented a large majority of the employees and with whom the company has had contractural relationships for years. There is no dispute between the company and its employees concerning wages, hours, or working conditions. Wages are well above the industry wage rate in this area; employees are given paid vacations, premium for night work, quarterly bonuses, and a liberal sick benefit, and pensions systems have been in effect for over 50 years.

Recently a wage disability plan was announced whereby the employees receive full wages during periods of illness or inability to work, varying on the length of service of the employee, and extending upward to the larger part of a year for the older employees.

Recently, the C.I.O. chief organizer admitted that they did not have a majority of the employees in their union. Failing to gain a majority of the employees and finding that a majority of them desire to have the independent union represent them, it is apparent that they have decided the only way they can get anywhere is to enlist the aid of the Labor Board in an effort to destroy the independent union and to create the impression in the minds of the employees that they cannot have an independent union even though they desire to have one. The company believes that the employees should be allowed to have a free and unrestricted choice as to what union they care to join. The company feels that the only fair way to decide this would be to have an election at which the employees are given the opportunity to say in a secret ballot whether they desire the independent union to represent them or whether they desire some other union. Obviously, the C.I.O. does not want this since they admit they do not have a majority of the employees as members.

Net-Weight Cotton Bill Defeated

By a vote of 146 to 166, the House of Representatives, on April 1st, defeated the Fulmer net-weight cotton bill (H. R. 968), following an extended debate on the measure.

This bill would have provided, among other things, for the establishment of standards for materials to be used for cotton bale coverings, and from and after the effective date of such standards would have made it unlawful for any person to buy or sell American cotton for shipment in interstate or foreign commerce except on net weight of the cotton.

Cotton House Exhibited in Government Building

A cotton house, developed in co-operation with the Cotton-Textile Institute, has been erected in the patio of the Department of Agriculture, Washington, and is now open to the public.

Examples of new uses for cotton are given a prominent place in the exhibit within the house. These examples feature cotton as used in concrete curing mats, as a reinforcing factor in lining ditches and irrigation canals, in airport runway construction, as a fireproof insulation, in a cloth used to prevent soil erosion, as a tobacco canvas to prevent tobacco blue mold, in the manufacture of hive coverings, and in a fabric used in the process of drying fruits. In the exhibit is also a display of cotton apparel—men's, women's and children's.

Phi Psi Takes Nine Men At N. C. State

Raleigh, N. C.—The N. C. State College Chapter of Phi Psi, largest honorary textile fraternity, has completed its Spring initiation in which nine outstanding students in the textile school were inducted into the order.

New members are Doug Allison, Pine Bluff; Bill LeGrange, Shelby; Bill Weaver, Salisbury; Norm Wiggins, Haverford, Pa.; Wallace Sutton, Rocky Mount; D. B. Finn, Concord; Harry Messersmith, East Orange, N. J.; Bob McLaughlin, Pittsburgh, Pa., and Bob Dalton, of Charlotte.

Rayon Yarn Inventory in Hands of Rayon Weavers Increases

The inventory of rayon filament yarns in the hands of rayon weavers at the end of April totaled 27,300,000 pounds as compared with 25,400,000 pounds at the end of March and 21,200,000 pounds on April 30, 1940. Based on the high rate of rayon consumpttion by weavers and the tight rayon yarn situation, this four weeks' supply of yarn held by weavers may be considered moderate.

These inventory data are compiled from reports made to the National Rayon Weavers' Association and the National Federation of Textiles, Inc., as released in the current issue of the *Rayon Organon*. The data represent the stock of rayon filament yarn held by rayon broad goods weavers in mill warehouses or unopened cases, but exclusive of stock in process or in transit.

U. S. Gutta Percha Paint Co. Adds To Southern Force

U. S. Gutta Percha Paint Co. has augmented its Southern sales force by appointing C. L. Park, with headquarters in Atlanta, Ga., to cover Alabama, Georgia, Louisiana and Mississippi, and by transferring T. C. Roggenkamp from Indiana to the Charlotte, N. C., zone.

L. K. Palmer is taking on, in addition to his present territory, the State of South Carolina and part of North Carolina. He will handle this additional territory in cooperation with his brother, John S. Palmer, who will continue to be, as he has been for many years, in charge of the company's Southern office, with headquarters in Greenville, S. C.

Mill News

CORSICANA, TEX.—Corsicana Cotton Mills have installed 12 new long draft roving frames and one Hermas shearing machine.

CHARLOTTE, N. C.—At the No. 4 plant of the Chadwick-Hoskins Co. here, a new waste house has recently been completed.

WACO, TEX.—The Texas Textile Mills have installed one Morrison Sanforizer and one Hermas shearing machine and brusher.

BERRYTON, GA.—The Berryton Mills, manufacturers of carded and combed yarns, recently installed eight additional combers. John M. Berry, of Rome, Ga., is president.

INMAN, S. C.—The Inman Mills, manufacturers of print cloth specialties, fancies, twills, piques and broadcloths, has recently completed the construction of a cloth room which provides a total of 15,000 square feet.

ABBEVILLE, S. C.—Abbeville Cotton Mills has signed a contract for power from the municipally owned Abbeville hydro-electric project, Kenneth Merkwell, project engineer, announces.

ANNISTON, ALA.—Anniston Yarn Mills, owned by the Broadalbin Knitting Co., of New York, has been purchased by Southern Mills.

Southern Mills also operates a plant at Oxford, Ala. Otto Latsch will management the Anniston plant for the purchaser.

TRAVELERS REST, S. C.—The Renfrew Bleachery is installing new equipment in the power plant extension at the mill, it was learned.

The new equipment includes a boiler, stoker, automatic coal handling equipment, concrete stove and an automatic coal scale.

J. E. Sirrine & Co., of Greenville, S. C., are engineers.

SHERMAN, TEX.—The Sherman Mfg. Co. has recently installed two new Abbott winders and have replaced 44 old looms with new Model X's. Five new Whitin long draft frames have also been put in. This will give Sherman Cotton Mills a total of 204 looms and 1,120 additional spindles.

ALABAMA CITY, ALA.—The addition to the Dwight Mfg. Co., of Alabama City, will have 20,000 spindles, with all preparatory and weaving equipment, the cost estimated to exceed three million dollars, according to J. E. Sirrine & Co., engineers. Fabrics for defense are to be made here. A contract has already been let to the Daniel Construction Co., of Anderson, S. C.

Dwight Mfg. Co. was established in 1841. George Nichols is treasurer.

VILLA RICA, GA.—It is reported that a new hosiery mill has been opened here under the management of J. C. Brown. The new plant is to manufacture half hose.

GRANITE FALLS, N. C.—Work has been started on the erection of a new hosiery mill here by the Cline Lumber Co., of Hickory. The mill is being built for two sisters, Misses Lois and Mamie McAffee.

LYNN, N. C.—The Pacolet Knitting Co., Inc., which formerly operated 210 circular knitting machines on half hose and anklets, has gone out of business and the machinery has been sold, according to reports.

HUNTSVILLE, ALA.—Charles A. Waller, vice-president of the Sears, Roebuck Co., Chicago, in a letter to the Huntsville Chamber of Commerce, says his company is interested in obtaining a site for a weave mill to be operated by a company that will sell its entire output to Sears.

The letter states the building must contain not less than 30,000 square feet of space.

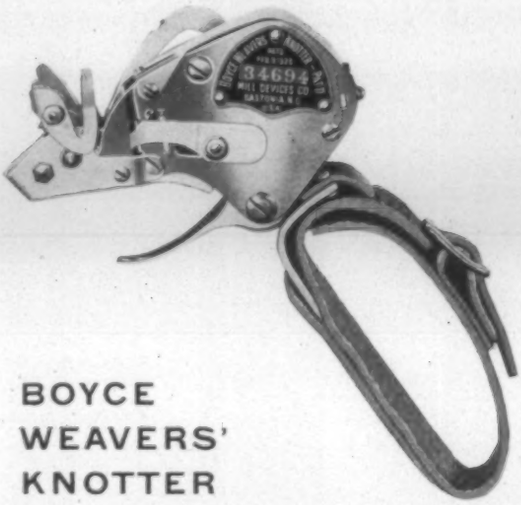
MONTGOMERY, ALA.—The property of Selma Mfg. Co. on May street in West End has been purchased by a newly-formed partnership known as the Montgomery Cotton Mills. The plant was sold by the estate of the late John F. Ames to the company, composed of D. H. Morris, Jr., and Joel E. Johnson, both of Geneva, and D. H. Morris, 3d, of Enterprise, and Charles E. Estes and Mabel B. Estes, of Montgomery.

Mr. Estes, manager of the plant when it was owned by Mr. Ames, said the new company would continue operations as before, and that "several improvements" would be made. About 250 persons are employed at the plant, which produces cotton cloth used for bagging.

PATTERSON, N. C.—Announcement was made here that the Patterson Mills, manufacturers of cotton yarn, formerly owned by the Cline Mfg. Co., of Hickory, has been sold to H. S. McIntyre, of Charlotte.

The mill, situated seven miles north of Lenoir, on the Blowing Rock road, was built shortly after the Civil War by the Gwyn-Harper Mfg. Co. In 1916, the Harper company sold the mill to Ben Newland, of Lenoir. In turn, the Cline Mfg. Co., of Hickory, bought out Newland.

According to the announcement, all employees of the mill will be retained. The mill is now operating under the direction of Mr. McIntyre.



BOYCE
WEAVERS'
KNOTTER

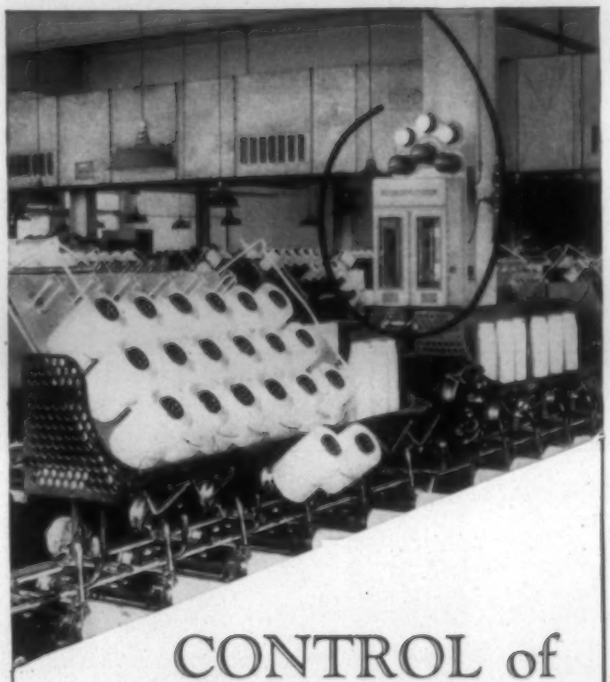
As Simple as That..

Ties a weavers' knot that becomes invisible in fabric—eliminates perspiration stains.

Simplicity and ease of operation... efficiency and speed... those are the proven qualities of the Boyce Weavers' Knotter... those are the essentials of profitable production.

Made in six types that are adaptable to any Cotton or Rayon yarns, the Boyce Knotter is doing the kind of job that can only be done with high speed precision equipment.

MILL DEVICES COMPANY
DIVISION OF
A. B. CARTER, INC.
GASTONIA, N. C.



CONTROL of *Certified* CLIMATE

The sensitive Psychrostat calibrates itself. Self contained thermometers (laboratory type) audit its action for you.

Surprising what a Psychrostat may be hitched up to do. Turns humidifiers on or off. Sprays (in Central Stations) on or off. Fresh air or recirculating dampers on or off.

A two-stage Psychrostat actuates humidifiers sort of double duty; light in winter, heavy in summer. Another stage may regulate temperature—right in the same instrument.

And now a new Psychrostat regulates the speed of Central Station fans. Makes Central Station Air Conditioning less expensive to operate.

In Parks Certified Climate installations you get all the experience that went into the development of this versatile control of Air Conditioning.

Parks-Cramer Company
Certified Climate
Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

Personal News

S. L. Deane is now superintendent of the San Antonio Cotton Mills, Southton, Tex.

Henry Wilson, formerly of Sylacauga, Ala., is now overseer of weaving at Avondale Mills, Pell City, Ala.

A. E. Dyson is now superintendent of the Dallas (Tex.) Cotton Mills.

J. C. Meehan is now overseer of weaving at Texas Textile Mills, Inc., McKinney, Tex.

H. M. Craig, secretary and treasurer of the Lola Mills, has been elected mayor of Stanley, N. C.

Ernest Toney is now overseer of spinning at the Dallas (Tex.) Cotton Mills.

Lee Powell is now master mechanic at the San Antonio Cotton Mills, Southton, Tex.

H. C. Yates is now chief engineer and master mechanic at Dallas (Tex.) Cotton Mills.

W. L. Sibley is now assistant superintendent of the San Antonio Cotton Mills, Southton, Tex.

Luther Hodges, general manager of the manufacturing division of Marshall Field & Co., recently addressed students of the Philadelphia Textile School at Philadelphia.

Dillon Poston has been promoted from assistant to overseer of weaving at the Pee Dee Mills No. 2, Rockingham, N. C.

W. K. Mauney, president of the Kings Mountain (N. C.) Mfg. Co., has been elected a member of the Kings Mountain City Council.

Caldwell Ragan, president of the Ragan Spinning Co., Gastonia, N. C., has been elected a director of the M. & J. Finance Corp., with headquarters at Gastonia.

B. E. Geer, formerly president of Judson Mills, Greenville, S. C., is president of the newly chartered Blyth Shoals Water Works, Inc., of Greenville.

John Land, secretary and treasurer of Threads, Inc., Gastonia, N. C., and Miss Carolyn Cantey, of Camden, S. C., and Charlotte, N. C., were married recently.

J. E. Stone, formerly overseer of spinning and twisting at the Whitmire, S. C., plant of the Aragon-Baldwin Co., has been transferred to the position of assistant superintendent of the Rock Hill, S. C., plant of the same company.

W. C. Frazier has been promoted from overseer of weaving to assistant superintendent of the Pee Dee Mills No. 2, Rockingham, N. C.

D. E. Simons, Jr., Clemson textile graduate of 1934, is now connected with Marshall Field & Co., Spray, N. C. He was formerly with Montgomery Ward.

C. W. Reynolds, formerly with the Morrillton (Ark.) Cotton Mills, is now overseer of weaving at the San Antonia Cotton Mills, Southton, Tex.

Leland Lapp has been promoted to the position of master mechanic at the Gaudalupe Valley Cotton Mills, Cuero, Tex.

George Lee, formerly of Starkville, Miss., is now overseer of carding at Hesslein & Co. (Bradford Mill), Prattville, Ala.

R. H. Lapp has been promoted from master mechanic to superintendent of the Gaudalupe Valley Cotton Mills, Cuero, Tex.

J. R. Jolly has been transferred from the position of overseer of spinning to that of employment manager of the Columbus mill of the Bibb Mfg. Co.

J. E. Dunn, formerly with the Gaudalupe Valley Cotton Mills, Cuero, Tex., is now night overseer of weaving at the Gonzales Cotton Mills, Gonzales, Tex.

W. A. Walker, formerly with Springs Cotton Mills, Chester, S. C., is now the North Carolina representative of Snap-On Tools Corp., Atlanta Branch.

C. M. Hemphill, Sr., formerly superintendent of the Greer Mill of the Victor-Monaghan Co., has become a magistrate at Greer, S. C.

Charles E. Mason has resigned as salesman for Joseph Sykes Bros. to accept a position in charge of the machinery maintenance department of the Bibb Mfg. Co., Macon, Ga.

Robt. I. Dalton, Jr., son of Robt. I. Dalton, Charlotte, N. C., one of the Southern representatives of the Whitin Machine Works, has been given the Phi Psi key award at N. C. State College because of being the textile sophomore with the highest scholastic average.

J. W. Simmons, Jr., has succeeded Joe Oliver as superintendent of Stodghill & Co., Inc., of Atlanta, Ga., producers of sizing materials and textile chemicals. He is a graduate of Georgia Tech and was formerly with the Talladega (Ala.) Cotton Factory.

Floyd C. Todd, president of F. C. Todd, Inc., manufacturers of picker aprons, has been re-elected a member of the City Council of Gastonia, N. C.

W. H. Suttenfield, treasurer of the Superior Yarn Mills at Mt. Holly, East Monbo, and Long Island, N. C., will, on July 1st, become associated with the American Yarn & Processing Co., Mount Holly, N. C.

S. B. Perkins has been elected president of the Dallas (Tex.) Cotton Mills.

Wade Hearn has been promoted from loom fixer to the position of assistant to the superintendent at Edna Mills, Reidsville, N. C.

Ben F. Cummings has been promoted from assistant night superintendent to assistant day superintendent, Jordan Mills, Inc., Columbus, Ga.

W. T. Worrels, formerly with Glen Raven Cotton Mills, Plant No. 2, Kinston, N. C., is now superintendent of the Harden plant of the Ranlo Mfg. Co., Gastonia, N. C.

Sloan Alexander has been promoted from the position of overseer of spinning to assistant superintendent in charge of night operations, Jordan Mills, Inc., Columbus, Ga.

C. K. Torrence, of the Gastonia, N. C., firm of Gullick & Torrence, will on July 1st become secretary and treasurer of the Superior Yarn Mills, with plants at East Monbo, Long Island, and Mount Holly, N. C.

J. K. Smith, who completed the textile chemistry and dyeing course at Clemson Textile School in 1939, is now employed in the laboratory of the Rock Hill (S. C.) Printing and Finishing Co.

Donald Comer, chairman of the board of Avondale Mills, of Alabama, was a guest speaker before the recent annual convention of the Alabama Federation of Women's Clubs.

W. L. Whisnant, for several years with Stodghill & Co., of Atlanta, Ga., as salesman, is now associated with Seydel-Woolley & Co. in a similar capacity. Mr. Whisnant had many years' experience in various mills as overseer of weaving before taking up selling of starches and sizings.

Coming Textile Events

MAY 22-23

Chattanooga Yarn Men's Association, Annual Two-Day Outing and Golf Tournament, Lookout Mountain Hotel, Chattanooga, Tenn.

MAY 23-24

South Carolina Cotton Manufacturers' Association, Annual Convention, Myrtle Beach, S. C.

MAY 29-30

Cotton Manufacturers' Association of Georgia, Annual Convention, Sea Island, Ga.

JUNE 7-8

Third Annual Textile Golf Tournament, Carolina Golf Club, Charlotte, N. C.

JUNE 12

Associate Members' Division, Southern Textile Association, Annual Banquet, Ocean Forest Hotel, Myrtle Beach, S. C.

JUNE 13-14

Southern Textile Association, Annual Convention, Ocean Forest Hotel, Myrtle Beach, S. C.

JUNE 27-28

American Association of Textile Chemists and Colorists, Piedmont Section, Annual Outing, Ocean Forest Hotel, Myrtle Beach, S. C.

Wm. F. LeGrand, son of R. T. LeGrand, treasurer of the Shelby (N. C.) Cotton Mills, has been elected president of the Tompkins Textile Society at N. C. State College.

Ernest Shumake has resigned as overseer of spinning at the Georgia Duck & Cordage Mill, Scottdale, Ga., to accept a position with Fickett Cotton Mills, Inc., Whitehall, Ga.

R. W. Schrimshire has been promoted from the position of superintendent of the yarn mill to general superintendent of the yarn mill, weaving mill and knitting mill of Jordan Mills, Inc., Columbus, Ga.

Clarence R. Howe Joins U. S. Bobbin & Shuttle Co.

Clarence R. Howe has become actively connected with U. S. Bobbin & Shuttle Co., Lawrence, Mass., and Greenville, S. C., as vice-president. To take up his new duties with U. S. Bobbin & Shuttle Co., Mr. Howe resigned his position as vice-president of the T. C. Entwistle Co., of Lowell, Mass., ending a 19-year association with that company. Previous to his association with Entwistle, Mr. Howe was associated with the Crompton & Knowles Loom Works, of Worcester, Mass.

Mr. Howe has for some time been vice-president and a director of the U. S. Bobbin & Shuttle Co., but until now has not been actively connected with the company.

Personnel Changes At Rock Hill Printing

Rock Hill, S. C.—Changes in the duties of four officials of the Rock Hill Printing & Finishing Co. were announced as follows: George Howell, purchasing agent, will be supervisor of personnel and purchasing; W. M. Hull, assistant purchasing agent, will be purchasing agent; J. L. Landauer, personnel manager, will have charge of pound goods sales, receiving of gray goods, all insurance except on personnel, and waste elimination; Dave Colitz will have supervisory charge of the shipping department, replacing Mr. Howell in that capacity.

Personnel Changes At Industrial Supplies, Inc.

LaGrange, Ga.—At a meeting of the board of directors of the company the following changes in personnel were made at Industrial Supplies, Inc.:

O. F. Nixon, Jr., will serve as treasurer in addition to his duties as president.

O. T. Kersey was elected vice-president and will serve as purchasing agent in addition to his duties as vice-president.

H. Wynne James was elected secretary and chief accountant.

Eugene Floyd was promoted from chief inventory clerk to office manager.

Julian W. Still, formerly connected with the Carolina Supply Co., of Greenville, S. C., has joined the organization as sales representative in the north Georgia territory.

Mill "Learner" Rules Revised

Atlanta, Ga.—Revised regulations permitting the classification of a textile worker who has moved to another mill as a learner while mastering a new type of work were announced May 18th by Regional Wage-Hour Director J. R. McLeod.

"Previously," said the announcement, "no employee with 240 hours' experience in one textile occupation could be employed as a learner in another textile occupation. This change permits the retraining, when experienced workers are not available, of newly hired employees who may have had previous experience in some other occupation or on some other product in another plant.

"However, the regulations provide that no worker who has been employed in excess of the learner period in one mill may be retrained within the same mill at learner rates."

Recodification and revision of the regulations were announced by McLeod following advices from National Wage-Hour Administrator Philip B. Fleming.

"By further defining the word 'available.' " the regional director explained, "the new regulations provide that unemployed experienced workers are to be considered 'available' when they are located within the area from which the employer customarily draws his labor supply, or when they have made themselves available to the employer at the plant and have signified their willingness to accept and continue in employment.

"Also, particularly in instances where objections are raised pertaining to the efficiency of particular workers, it is provided by the new regulations that unemployed workers must be regarded as 'available' if they are capable or equaling the performance of workers of ordinary or minimum skill in an employer's plant in the occupation for which they are being considered."

OBITUARY

PATRICK McGARITY

Greenville, S. C.—Patrick McGarity, 59, for 19 years superintendent of Mills Mill, died suddenly at his home recently. Mr. McGarity had been in ill health for some months, but was seemingly in his usual condition and his death came as a distinct shock to his family and friends.

Mr. McGarity was a native of Georgia. For a number of years he was assistant superintendent of Arcadia Mills at Spartanburg, which position he held just prior to becoming superintendent of the local mill, and was widely known in textile circles.

Mr. McGarity was a member of the Emanuel Baptist Church.

He was also a member of the Masonic bodies, in which fraternity he had taken a deep interest for a long time.

R. N. WESTMORELAND

Spartanburg, S. C.—R. Nesbutt Westmoreland, overseer, church and civic leader, died at his home in Spartanburg April 19th, following an extended illness. He was formerly connected with New Holland Mill, Gainesville, Ga., and Riverdale Mill, Enoree, S. C. He had been connected with Spartan Mills for the past 12 years as cloth room overseer.

TEXTILE BULLETIN

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Record Consumption

The April cotton consumption of mills in the United States broke all-time record for any month by reaching a total of 920,142 bales. The largest previous monthly consumption in history was in March when mills consumed 854,179 bales. Consumption for the nine months ended April 30th totaled 6,995,238 bales as compared with 5,953,999 bales in the corresponding period last season. There is no longer any doubt but that consumption this year will top 9,000,000 bales.

The April, 1941, consumption of 920,142 bales was accomplished by 22,787,396 spindles.

In April, 1921, or twenty years ago, we had 36,047,468 cotton spindles in operation in the United States. During that year they consumed 4,892,672 bales of cotton, or an average of 407,000 bales per month.

In January, 1927, with 32,920,466 spindles in operation, we reached a monthly consumption of 694,193 bales, which was the record up to that time.

In August, 1932, which was in the midst of the depression, consumption reached the record low of 322,706 bales, and yet the spindles in operation that month were 22,045,060, or almost the same as during the past month.

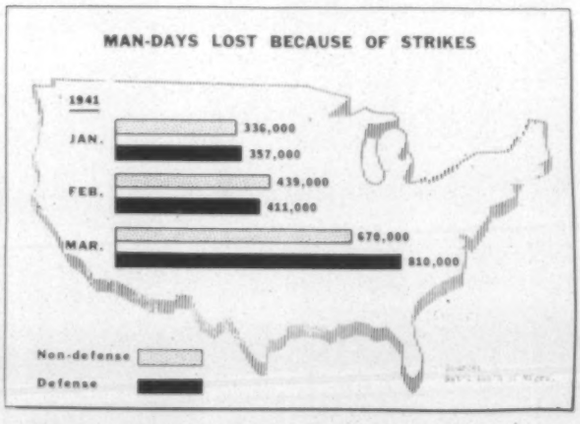
In 1932, 22,045,060 spindles consumed only 322,706 bales, but in April 1941, 22,787,396 spindles consumed 942,142 bales, or almost three times as much.

In 1932, mills were, as a rule, operating 55 hours and some were upon a two-shift basis, or 110 hours.

It is true that in April, 1941, most mills were operating three shifts of 40 hours each, or 120 hours, but it will require more than the extra hours to explain how 22,000,000 spindles in April, 1941, could consume almost three times as much cotton as 22,000,000 spindles in 1932.

The only answer, as we see it, is that as the result of improved machinery and improved methods of operation there has been a marked increase in the production per spindle per hour.

Man-Days Lost Because of Strikes



The above chart, which was prepared by the National Association of Manufacturers, illustrates in a very vivid manner how the defense program is being hindered by strikes.

The total number of man-days lost from strikes in the first three months of 1941 was more than three and one-third times as great as the figure for the same quarter last year.

The first six months of actual defense production—the latter half of 1940—were accompanied by a 64 per cent increase in loss from strikes, the study revealed. The figures were broken down as follows: During the first six months of 1940, 202,000 workers lost 2,469,000 days by strikes; in the second half of the year the figures were 373,000 workers and 4,031,000 days lost.

For each day lost from strikes in the first quarter of 1940, there were more than three days lost in the same period of 1941. And 64 per cent more man-days were lost in strikes in the single month of March, 1941, than were lost in the first quarter of last year.

The N. A. M. also points out that, contrary to some statements, time lost from strikes in England is far less than in the United States. In 1940, there were 940,000 man-days lost by strikes in England, compared with 6,500,000 in this country. Further, it was stated, nearly as

many man-days were lost in U. S. defense industries alone in March of this year as were lost in all British industries in the entire year of 1940.

In this period, which is a period of vital importance to the people of the United States, every action on the part of government, employers and employees should promote the complete and uninterrupted utilization of all our facilities, both human and material. Only in that manner can we be sure of defending the rights and liberties which we as Americans hold to be vital to our way of life.

Continuous and efficient production for national defense is of vital importance, and demands full support of the nation's preparedness program by every individual and every group. Every citizen should clearly realize the desperate need for speed in producing goods essential to national defense.

Ericson Again

Most of the communists and friends of communism are keeping quiet and, like snakes in hibernation, are keeping themselves safe while waiting for the distress period which will follow this war, when they will come forth and seek to lead people towards a revolutionary change in our form of Government.

But not Prof. E. E. Ericson, of the University of North Carolina, for on a Sunday afternoon a short time ago, he addressed a meeting at High Point, N. C., sponsored by an organization called the League of Young Southerners and presided over by a representative of the American Peace Mobilization Movement.

In his address Professor Ericson declared that the present war is not democracy vs. totalitarianism but that corporate interests armed Hitler because they thought that he would turn elsewhere and not against them.

Professor Ericson launched a vicious attack against press and radio and charged that the same interests which would lead the United States into war owned the newspapers and the radios and would not give movements for peace their proper share of publicity.

In 1934 a man named Roland Gibson was arrested at Rutherfordton, N. C., after a radical address.

The warrant charged that he "did preach and promulgate sedition and that he did propose to find, provide and furnish money to promote and support a revolution against the United States Government."

The first act of Gibson after landing in jail was to ask for a telegraph blank and wire E. E. Ericson at Chapel Hill, N. C., to arrange his bond and to employ a High Point, N. C., lawyer.

When the American Federation of Labor refused to condone the dynamiting of cotton mills at Burlington, N. C., or to give financial assistance to those who did the dynamiting, a communist from Virginia took charge and Professor Ericson immediately appeared at Burlington as his assistant.

Probably the most noted incident in the career of Professor Ericson was when he ate dinner in a negro hotel in Durham, N. C., with a negro communist named Ford, but after that incident he was promoted and given an increase in salary.

While the United States is facing the most critical period in its history, Professor Ericson addresses a meeting and attempts to create distrust and dissension by charging that corporate interest in England and the United States armed Hitler and promoted this devastating conflict.

He offered no proofs nor cited any facts as the basis for his charges and it is our opinion that his only purpose was to weaken American resolve to prevent the destruction of Great Britain by Hitler. It appeared to be a typical fifth column effort.

Professor Ericson draws his salary from funds provided by the taxpayers of North Carolina.

Textile Golf Tournament

We wish to again call attention to the Third Annual Textile Golf Tournament, which will be held at the Carolina Golf Club, Charlotte, N. C., on Saturday and Sunday, June 7th and 8th, 1941.

In order that mill employees and salesmen may participate in the tournament, without losing any time from their work, they are permitted to qualify on any day beginning Friday, May 30th (National Decoration Day) and ending Friday, June 6th. The qualifying days therefore include a Saturday and a Sunday. Anyone wishing to qualify may on any of the above days needs only to register with Sut Alexander, manager of the Carolina Golf Club, and pay the tournament fee of $2.00. Having once registered and begun a qualifying round, it cannot be abandoned and another qualifying round played.

If the player is to be considered as the member of a mill team he must give such notice before he begins his qualifying round.

The players will be divided into flights of eight. All matches are to be played on Saturday and Sunday, June 7th and 8th.

Very few mill officials can successfully compete with the loom fixers, speeder tenders and other employees but we do hope to see many presidents and treasurers entered.

DYEING AND FINISHING

Processing Spun Rayon Piece Goods

Part II

By C. R. Stockton

THE initial article* of this series discussed the general preparation and dyeing operations required for handling spun rayon (viscose) piece goods as self-viscose fiber fabric or in combination with acetate rayon or wool.

In this article and subsequent ones, various phases of the effect that pigmentation has on acetate and viscose rayon during the preparation, dyeing and finishing operations will be discussed.

Some of these special phases that possess practical interest to a majority of rayon dyers and finishers are:

1. Laboratory and plant evaluation methods for wetting agents to be used in processing pigmented rayons.
   (a) Jigg dyeing.
   (b) Beck or box dyeing.
2. Comparative study of light fastness of various acetate and direct colors on lustrous and heavily pigmented acetate and viscose rayons.
   (a) Self shades.
   (b) Compound shades.
3. Dyebath stability and the possible effect on color values from pigmentation.
   (a) Retardant.
   (b) Physical effect.
   (c) Chemical effect.
4. Catonic agents and their evaluation.
   (a) Effect on light.
   (b) Effect on wash fastness.
   (c) Effect on hand or feel of goods.

Wetting Agents

Laboratory test methods give a few tentative evaluation pointers for wetting out agents on pigmented viscose rayon but the results are less definite in testing pigmented acetates. This is largely due to the difficulty of wetting out even the lustrous acetate fibers while the pigmented yarns are much more difficult and the dyeing of acetate fibers is distinctly different from that of viscose fibers.

The American Association of Textile Chemists and Colorists offer their official *Daves test*, which is the standardization of many tests that preceded it.

A variation of this test method has been found useful, that is, by using a 4 gram weight as sinker and a 2x2-inch piece of goods as material under test.

It has been found best to test all wetting agents at 80-120° F. in solutions of 0.1 gram to 3.0 grams per liter strength for a plant chemist may find a wetting agent that gives very rapid wetting acttion at 140-160° F. but such a product may be worthless on pigmented goods at lower temperature and actually may not possess any real wetting action on pigmented fibers until the higher temperatures have caused the rayon fibers to swell.

An inexpensive stop watch is required to check the wetting out period correctly at the different temperatures and solutions. Wetting agents that show a speed of 20 to 40 seconds on pigmented viscose usually requires considerably longer period on acetates.

Another interesting angle for testing is to take a test solution, heat it to a dyeing temperature of 190° F. and keep it at that for one to four hours, allow it to cool, make to volume with fresh water, then make a series of wetting tests. The results will be surprising and in many cases the wetting action was null and void after simulating the heating action of an actual dyeing operation.

Tabulation of these tests helps the laboratory give the dyer some good leads as to what classification the wetting agent under test belongs and just where it may prove useful and why.

Wetting agents may be classed under several headings with recommendation for use in plant because of their special characteristics.

Classification

1. FLASH.

*Processing Spun Rayon Piece Goods, Part I, Textile Bulletin, April 15, 1941.

(a) A very rapid acting wetting agent at low temperature and one that holds its wetting action plus solubilizing action at temperatures up to 170-190° F.

(b) This product can be applied to padding and quetsch processing satisfactorily.

(c) On jigg processing it is good for dyeing pigmented acetates such as sharkskins, poplins, etc., where the dyeing procedure calls for temperature of 100° to 160° F.

(d) This type of agent is not very satisfactory for dye becks or boxes.

(e) If a wetting agent of this type tends to give the flat goods on a jigg an oily feel then it should be discarded in favor of one leaving the flat goods with a clean feel of freshly scoured goods.

2. Steady.

(a) A moderately rapid wetting agent at 120° to 140° F.

(b) This type is usually satisfactory for jigg dyeing on coarser constructions requiring high dyeing temperatures of 180° to 200° F. in the bath as the batching roll temperature will be about 160 to 180° F.

(c) For dye becks, products with these properties will usually give good results at temperatures of 160° to 180° but can be used at higher temperatures if the chemical make-up is not too volatile at or near a boil.

3. Slow.

(a) A slow wetting out agent at 100 to 120 ° F. but thorough at high temperatures and free of volatile agents.

(b) Agents of this type are useful for the boil-off, scour, creper, cauticizer, and on heavy goods where an agent must be stable and give good results over long dyeing periods.

(c) Useful for dye becks, but not recommended for jigg work unless the goods are to be started dyeing on jigg and finished off on beck.

On heavily pigmented acetate and viscose flat goods it is advisable to use a scouring assistant to clean a fabric as well as swell the fibers sufficiently for a slower acting wetting agent to give good results, such an agent can be made of a pine oil jelly with a small percentage of solvent such as xylol and using for a fiber swelling agent a mild alkali such as sodium pyro phosphate.

A sulfonated fatty alcohol can be used as a carrier for the pine oil in preference to sulfonated castor or oleic acid which are used in the preparation of pine oil jelly scours for kier boil out on cotton goods.

The cotton kiering compounds may be used if the alkali used in them is soda ash or sodium pyro phosphate in preference to caustic soda.

It is rather dangerous to use scouring agents containing too much free alkali such as caustic soda, as it would give uneven swelling of acetate fibers and may cause saponification marks on the acetate fiber throughout a fabric, thus giving resist effect against acetate colors.

Light Fastness

The continually increasing pigmentation of acetate and viscose rayon fibers has now reached a point on flat goods where it is becoming increasingly difficult to obtain light fastness of 40 to 60 hours on the pastel to medium shades. This is especially true of the light tan shades as well as maize, yellows, turquoise and any group of compound shades requiring yellow or orange components.

The pigmenting agents appear to decrease the light fastness properties of yellows, oranges, reds, and blues in the order listed.

Yellows and oranges may show up very good on light fastness in self shades but when these colors are used for making compound shades they are the first colors to "break" on a severe light fastness test.

The same colors and shades may be run on lustrous acetate and viscose fabrics such as satins, taffetas, French crepes, and other qualities and repeated on various degrees of pigmented goods. Light tests then made at 20-30-40-50-60 Fadeometer intervals give some interesting results as to the effect of the increasing pigmentation.

Some authorities advance the suggestion that the fading of dyed rayons, especially heavily pigmented acetate on exposure to sunlight or the various light testing units such as a Fadeometer is caused by chemical as well as physical reaction set up by the effect of sunlight or artificial light on the pigmentation agents within the fiber and that the resultant agent then acts on the dyestuff on and within the fiber thus destroying or discharging it partially or totally.

Another line of thought as to why these colors show such poor light fastness is that the colors composing the dyed shades lay largely on the surface or near the surface of a fabric and do not penetrate the fiber and fabrics of heavily pigmented fabrics as they do on lustrous and semi-pigmented rayon fabrics. This is more of a practical viewpoint than the first suggestion and dyers have become very resourceful in obtaining excellent penetration in the dyeing of heavily pigmented acetate sharkskins that was not considered feasible when these goods were first introduced to the trade.

Dyed shades on heavily pigmented viscose fabrics show a noticeable improvement on light fastness which is made possible by careful study of processing operations. Acetate rayons show some improvement on light fastness but not the same degree as the heavily pigmented viscose.

Dyers have worked out various schemes of dyeing operations for these goods which includes the padding of pigmented viscose rayon goods with agents to help solubilize the sizing agents as well as swell the fibers, thus assisting in better penetration when these goods are dyed later on the dye beck or jigg.

On acetate fabrics, it has been found best on the coarser heavily pigmented goods to give them eight to twelve ends on the jigg after a thorough pre-scour, then transfer to a dye beck where the bath is "sprung" with a small amount of color. The goods are then run for one to three hours at 190 to 200° F. to permit the acetate color to penetrate the pigmented fibers.

The greatest danger in dyeing flat goods by this jigg

beck method is that great care must be exercised in the dye beck to prevent over-crowding of these goods while in the rope form or they may be "crocked" and give a poor appearance when finished.

A group of direct or viscose rayon colors that now are giving fair to very light fastness on these heavily pigmented goods are:

Pontamine Fast Yellow NN	Good
Formanil Navy G	Good
Pontamine Fast Yellow 4GL	Fair
Solantine Yellow RL	Fair
Benzo Fast Red 6BL	Very good
Formanil Green G	Very good
Amanil Fast Red 8BLN	Very good
Chlorantine Brown BRL	Good
Solantine Orange G	Good
Chlorantine Green 5BL	Good
Pontamine Fast Black LCW	Fair
Amanil Fast Blue 4GL	Very good
Chlorantine Orange TG	Very good

The following list of acetate colors show how many acetate colors that possess good or better light fastness are practically eliminated from the rating of light fast colors when dyed on heavily pigmented acetates.

40-Hour Fadeometer Ratings on Light to Medium Shades

Color	Lustrous Acetate	Pigmented Acetate
Cellitone Fast Yellow G	Good	Moderate
Cellitone Fast Rubine 3B	Good	Moderate
Acetamine Orange GR	Good	Moderate
Acetamine Scarlet B	Good	Moderate
Celonthrene Yellow G1	Very good	Moderate
Cellitone Fast Pink 3B	Very good	Fair—good
Cibacette Blue BG	Very good	Fair—good
SRA Green Blue II	Excellent	Very good
SRA Red FSI	Excellent	Very good
Cellitone Fast Yellow RRA	Very good	Poor
Calonese Sapphire Blue	Good	Fair
Acetamine Red RP	Good	Poor
Amacel Brilliant Blue B	Very good	Good
Setacyl Yellow 5G	Good	Poor

Supratol FV

Supratol VF, manufactured by Hart Products Corp., is said to be a highly sulfated oil that not only promotes level dyeing of wool and assists in penetration but also protects the fibers both in dyeing, bleaching, drying, and in after use.

Wool is a very sensitive fibre and is readily subject to damage. The removal of the natural grease content of the wool leads to deterioration of the handle and strength of the stock. For that reason, preference should be given to those dyeing assistants that are able to protect the fibre and at the same time possess good dyeing properties.

High sulfated oils, of which Supratol VF is said to be an outstanding example, possess both the property of lowering the surface tension of the dyebath and affording protection to the wool fibers. Unlike many other textile assistants, Supratol VF is a homogeneous chemical body.

Hygrade Sylvania Expands

Ground will be broken soon for a fluorescent lamp plant at Danvers, Mass., according to an announcement made by F. J. Healey, vice-president and general manager of the Hygrade Sylvania Corp.

The building, which will cost approximately one-half a million dollars, will have a structural steel frame with a brick exterior. It will be two stories high and will have about 100,000 square feet of floor space.

The transferal of all fluorescent lamp manufacturing activities to this new building, when ready, will relieve the situation at the Boston street, Salem, plant, where more spaced is needed for incandescent lamp manufacturing and special products.

Hygrade Sylvania Corp., at the present time, manufactures fluorescent lamp starters, fluorescent lampholders and fluorescent powders, and fluorescent sign tubing, in addition to the manufacture of fluorescent lamps and complete fluorescent lighting fixtures (brand name "Miralume"). In the manufacture of incandescent lamps it is third-ranking in the industry, and in radio tubes it is second in size.

Huge Cotton Tent Will Cover Site of Dam

Seattle, Wash.—What will be one of the world's largest cotton canvas tents is now being constructed in Seattle, the National Cotton Council reports. The tent will be spread over the site of the Mud Mountain's dam in Washington State, serving as a protective covering.

The tent will re quire 13,000 square yards of 10-ounce waterproof cotton canvas. Weighing 30,000 pounds when dry, the tent will be suspended over the work site by a network of steel cables. A foot of snow will increase the weight to 640,000 pounds. A total of 29,000 feet of rope will be used in the manufacture of the tent.

Circular Loom Reported Invented By Russian Engineer

A circular loom producing cloth in a sort of endless tube instead of the ordinary strip has been invented by S. A. Dynnik, a Soviet engineer at the Bast Fibres Institute in Moscow, according to recent reports from England.

The warp is said to differ considerably from the usual, being in the form of a tent with two shuttles revolving in a circle. There is continuous circular movement of the two shuttles, which is claimed to eliminate unproductive expenditure of energy. As a result, this machine, besides laying the thread evenly, is claimed to have twice the capacity. It occupies only two-thirds of the space of an ordinary loom.

The cop or supply of weft thread in Dynnik's loom weighs 21 ounces, 15 times more than the cop of an ordinary loom. As a result, the spindles in Dynnik's loom have to be changed once for every 15 times in the ordinary looms. Moreover, there will be much less tearing of the thread on the new loom.

The Bast Institute estimates that if all the sacking in the Soviet Union were to be produced on circular looms, 13 million roubles would be saved annually.

Eastern Carolina Group Discusses Mill Problems

(*Continued from Page 18*)

Mr. D.: We are making 50-grain card sliver.

Mr. Gilliam: Did you find it necessary to reduce the size of your trumpet?

Mr. D.: No, sir. We have not gotten that far. We have made some tests on the drawings and speeders and spinning for variation and for breaks, and we have not found that it has affected us.

Mr. Gilliam: You do not think it affected your future processes?

Mr. D.: No, sir, I don't think it helped us or hurt us. I think it is the same kind of stock that it was before we changed. It just helps us out.

Mr. Gilliam: It gives you more time for cleaning, etc.?

Mr. D.: It gives this man time to run 50 cards instead of 40, and we thought that a right good change.

Mr. Gilliam: It does give you more time for piece-ups, etc.?

Mr. D.: Yes, sir, it improves it in that way. But even with those good qualities and the help to the card tender, I somewhat disagree with some of my friends on it. I believe that there is a danger of bad work on the cards with it.

Mr. Gilliam: What do you mean?

Mr. D.: With this spring on there it will break through the doubling: As I say, I have not changed by trumpets. It will break through that doubling and will not break it down. I believe there is that danger. All of us have more doublings going through than we are willing to admit.

Mr. Gilliam: Isn't there a tendency to let the cans get too full, just to carry out this gain?

Mr. D.: Yes, sir, there is a danger, and I am constantly talking to my foreman in the carding department about that. He takes some of this sliver and checks it off the top of the can for stretch and variation and goes back to the middle of the can and checks that. I think we have not found any trouble of that kind, have we, David?

Mr. E.: No, sir.

Mr. D.: We also found that if we open our back rolls on the drawings it gives that stock a chance to open up a little better.

Mr. Gilliam: You have to use more draft?

Mr. D.: Yes, sir.

Mr. Gilliam: How much did you open your rolls?

Mr. D.: One-sixteenth, I think.

Mr. E: No, sir, it was three-eighths of an inch. (Laughter.)

Mr. D.: Well, you opened something one-sixteenth.

Mr. E: The back roll on the drawing.

Mr. D.: We thought after condensing this sliver it made it just a little bit harder on the cork rolls on the drawing, too.

Mr. Gilliam: You wished you had the metallic rolls back, then, when you got into that?

Mr. D.: Well, we have two metallic rolls. It is bad on the cork, we think. As a whole, though, we are pleased with it; we think it helps us.

Mr. Gilliam: In your experience, did you try to outdo the man that made it? Did you try to make it condense more, or did you use it just as the thing was sent to you?

Mr. D.: No, we didn't try to make it do more; we tried to make it do what the man who sent it to us said it would do, but we found the belt was slipping. Instead of cutting our blocks down we put a washer under that stand and raised it up and took some of the tension off the spring. We did not want to do any better than he said it would do, and we found if it did as well it took a little too much horsepower for the belts. So we put little washers in there to relieve some of that pressure. We have found that we are getting good results with it, and we would not be without it, since we can not have another card hand. (Laughter.)

Mr. Gilliam: Mr. F, have you had some experience along that line?

Mr. F.: We put it on all our cards about four or five months ago. We ran the springs all the way down; in other words, we took the full benefit of it, and we did not run into any trouble whatsoever. However, with the first ones we tried we ran a test on it with the spring all the way down and also part of the way down, and we did not find any difference between all the way down and halfway down.

Mr. Gilliam: What results did you get in time, etc.?

Mr. F.: It seems to me we got more results than these fellows say they did—around 45 per cent. We ran the poundage in the cans from 10¼ or 10½ up to between 14 and 15 pounds.

Mr. Gilliam: That is nearly 33-1/3 per cent?

(*Continued on Page 53*)

POSITION OPEN — Established sheeting mill changing over to make army duck for defense purposes, requires services of experienced weaving overseer. Would consider ambitious second hand. Apply "Army Duck," care Textile Bulletin.

EXPERIENCED WEAVER on Model X Looms available immediately. Past draft age. Have run largest weave room in South. Best of references. Address "Model X," care Textile Bulletin.

POSITION WANTED as overseer of cloth room, finishing and Sanforizing. Fifteen years' experience. Some experience in designing. 38 years of age. Married. References. Address "Finisher," care Textile Bulletin.

WANTED—One or more high class, ambitious men to represent a concern well known, and of the highest standing among the textile mills of the South, which specializes and predominates in the manufacturing of one item only. Address "A. B. C.," c/o Textile Bulletin.

WANTED—Position as yarn or weave mill superintendent. 22 years' experience in some of the best combed mills. High school graduate. I. C. S. graduate. Eleven years general overseer, 2½ years as superintendent of two yarn mills. 2 years as general superintendent of one yarn mill and one fancy weave mill. 39 years old. Will run any mill anywhere if pay is right. Satisfactory references furnished. Address "I. C. S.," c/o Textile Bulletin.

West Point Mills Draft Recreation Program

West Point, Ga.—With the announcement by the West Point Mfg. Co. that it has organized a recreation department of this corporation and that it has employed the services of Robert A. Turner, former community manager of Fairlawn, N. J., as general director of recreation, the recreation for the five mills towns of the Valley, to be as comprehensive in scope as the desires of the people in the community, is now assured. In the Valley there are a large number of units of the West Point Mfg. Co., large textile mill.

Mr. Turner has arrived and will begin work at once setting up a valley-wide program that will be carried out with a resident assistant director in each of the five towns.

American Enka 1941 Net Lower At $1,905,231

Net profits of $1,905,231, after provision for Federal income and excess profit taxes, is reported by American Enka Corp. for the fiscal year ended Dec. 29, 1940. This compares with net profit of $2,241,942 in the previous fiscal period.

Results of the past fiscal year were affected by a flood which occurred Aug. 30th and which caused a shutdown of approximately ten days in September. A flood loss of $427,266 was charged to operations.

Index to Advertisers

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

Classified Department

POSITION WANTED as overseer of weaving. 16 years' experience as overseer on box looms and Drapers, plain and fancies. On novelties for past six years. 45 years of age, sober, references. Address "835," care Textile Bulletin.

WANTED—Position as Overseer of Cloth-room. 15 years' experience. Now employed, sober and know cloth. More information on request. Address "Cloth Room," care Textile Bulletin.

LARGE PRIZE-WINNING CHRYSANTHEMUMS, Silver Wedding White, Golden Glow Yellow, Hinson Lavender, Martha Marie Pink, Bronze, Cream, Variegated. 25 plants, $1.35; 60, $2.65. All colors, button and daisy type; 20 plants, $1.00. Red Verbena, 45c doz.; Red Spider Lilies, 50c doz.; Blue Violet, 20c doz.; Chasta Daisies, 30c doz; fine Yard Fern, 20c doz. Silver Floral Garden, Rt. 5, Cuthbert, Ga.

WANTED—Position as master mechanic; 15 years' experience as same. Thoroughly familiar with steam or electric drive; machine shop work, repairing, upkeep, installation of mill machinery and power plant equipment. Address "M. M.," c/o Textile Bulletin.

Wage and Hour Regulations Discussed At Reidsville Meeting

(Continued from Page 24)

you to familiarize yourself with labor laws and to see that in your plant, they are lived up to completely—not partially.

As to the State laws: we have a child-labor law which prohibits children under 16 from working in manufacturing plants. Between 16 and 18 years an employment certificate must be secured from the county superintendent of public welfare. There are a few occupations in which the employment of minors under 18 is prohibited. A girl under 18 may work until 9 o'clock at night but not later. She may work nine hours a day and 48 hours a week. Boys may work until midnight but not later. That is about all there is to the child-labor law. It is not so complicated, and it should not be difficult to comply with.

The State maximum-hour law allows women to work nine hours day and 48 hours a week. There are few exceptions, and no one has authority to issue a permit to allow longer hours. That act was adopted before the Fair Labor Standards Act, and the legislature felt that nine hours a day was long enough for a woman to work in modern industry. Whether they were wrong or not makes no difference, that is the law. I think they were right. Men are permitted to work ten hours a day and 55 hours a week, and there are a good many exemptions and exceptions for men. Members of repair crews, engineers and electricians in emergencies may work up to 60 hours a week and the daily hours are not limited. Then in a seasonal rush of business the law gives the Commissioner of Labor authority to issue a permit allowing men to worker longer hours if time and one-half is paid for all hours overtime.

Women may work only six days a week; men may work 12 out out of 14 consecutive days.

What is a day? A day is any period of 24 consecutive hours. I had a telephone call yesterday morning from a textile manufacturer asking if his third shift, that goes off at 6 o'clock on Saturday morning, might come back in the mill at 5 o'clock in the afternoon and work four or five hours. I told him no. If he followed that practice, those people would be working about 13 hours out of a consecutive 24-hour period; if he did that, he would be violating the law. A day is 24 consecutive hours, and the law limits men to ten and women to nine hours work in that period.

The Fair Labor Standards Act was enacted in June, 1938, becoming effective on October 24, 1938. This law fixes maximum hours, minimum wages and regulates the employment of minors in all occupations affected by it.

The Child Labor provisions of the Fair Labor Standards Act require employment certificates for minors under 18. An employment certificate issued by the State, through a county welfare department, is accepted by the Children's Bureau which administers the Child Labor provisions of this Act. So if you have on file an employment certificate from the county welfare officer for a minor, it will meet the requirements of both laws. It is only those under 18 years of age that have to have employment certificates, but the administrator of the Federal law asks that a list of those under 19 years of age be

kept, with a record of their date of birth. Such records are a protection to the employer.

There are a few occupations in the textile industry where employment of minors under 18 is prohibited by Federal law but not by State law. A 17-year-old minor helping on a truck is a violation of the Federal law; but not of the State law.

The county superintendent of public welfare is authorized to issue age certificate for those minors who may be 18, 19 or 20 years of age. When a youngster who says he is 18 or 19 seeks work, he should be required to secure an age certificate, if there is any doubt about his age.

The Fair Labor Standards Act provides for a 40-hour week and a 30-cent minimum wage. In a few industries higher wage scales have been fixed by industry committee recommendations—for instance, the wage scale for the cotton textile industry is 32½ cents an hour. If employees work longer hours, they must be paid time and one-half their regular rate of pay. If they are on a piecework basis and work 50 hours in one week, making an average of 40 cents an hour, for the last ten hours you have to pay them at the rate of 60 cents an hour, which is time and one-half the average wage, making their wage $22 for the week.

That is practically all there is to it. The difficulty most people have with the Fair Labor Standards Act is in their efforts to get out from under it. As long as you obey those two things—the hour and the wage provisions—it is a very simple piece of legislation.

I do want to make this observation: On the whole, the textile manufacturers in North Carolina have been very liberal in their attitude toward labor legislation. I recall that back in 1937 the members of this industry did a great deal toward securing the enactment of the child-labor law in North Carolina, which is one of the best in the country, and also a great deal toward securing enactment of a maximum-hour law. That law is now on the statute books. Many representatives of your industry were helpful in getting legislation of that kind enacted. It is my opinion that, with the exception of a scattered few, the only thing that is feared is unfair competition from the employer who seeks to evade the laws, and not the fact that you must work your employees shorter hours and pay them a minimum wage. I have been greatly influenced in this opinion by observing the reaction of the textile manufacturers to the Wage and Hour Law. You remember that about a year and a half ago a committee was appointed by the Administrator to fix a minimum wage under the Act. For many weeks there was wrangling about what that wage should be. Finally it was fixed at 32½ cents an hour. In striking contrast, a similar committee on which there were three North Carolinians and ten Southerners in all, met in Washington recently and after only a few hours of discussion adopted a wage of 37½ cents an hour for the textile industry. In my opinion this shows that the Southern representatives of industry have accepted fully, in principle, the Wage and Hour Law and have found that the minimum wage and the overtime provision has not seriously affected the textile industry. On the whole, I think there is a feeling that if an employee works overtime he is entitled to extra compensation. If business is good enough to make it profitable to work longer hours, then it is good enough to pay employees extra for working those longer hours.

Employers in the textile industry in this State have accepted this law and the majority have abided by it in principle. On the whole they have not found it a handicap even though there may be some minor irksome things about it.

I want to discuss for a moment the administration of this law in North Carolina. About 15 months ago the State Department of Labor entered into an agreement with the Wage and Hour Administration and the Children's Bureau to administer the Fair Labor Standards Act in North Carolina—that is, to make inspections for compliance. As a result of this agreement when our inspectors make State inspections they also make Federal inspections, thus preventing duplicate inspections. Now, I know that management is busy and that it is harassed at times with inspectors and tax collectors and auditors and if in any way the administration of laws can be simplified so that management will not be bothered by so many people coming around, I think it should be done. By reason of this dual administration it is much easier to keep informed about labor laws. If you wish to telephone you can get information about both State and Federal laws; if you want to write, one letter will bring information about both. When an inspector makes his call he can tell you about both laws. If an employee has a complaint, that complaint can be dealt with by the same inspector, whether it is under the State or Federal law. That is the objective of this agreement.

Under the agreement our job has been to make inspections, and then to turn the cases over to the regional office for disposition. This has resulted in much confusion and considerable duplication of effort. It has been a lot of work and a lot of worry. But I have felt that the people of North Carolina would prefer that we handle it, so that our inspectors would make both inspections instead of having duplicate inspections.

We are now entering into a new agreement, and under this agreement the State Department of Labor will be responsible not only for making inspections but for the closing of cases except in cases where legal action is necessary. I urge, gentlemen, that we receive your full co-operation in this administration. It will be our duty, of course, to bring all violators into compliance. It will be our duty to report willful violators to the legal division for legal action. We shall administer this law under the same procedures as set up for South Carolina, Virginia, California, New York, or any other State. The work which we do and the cases which we close will be reviewed in Washington just as those in other States of the Union. There will be no difference; there will be uniform enforcement and uniform compliance.

You probably saw in the newspapers only a short time ago where it was necessary for one textile manufacturer to be indicted. He was found guilty of violating the law and a rather heavy fine was imposed—something over five thousand dollars. However, most of the firms we deal with, voluntarily complied with the law; and if restitution of wages was necessary they have made it. Such action is to be preferred rather than a resort to legal action. I hope you gentlemen in this State will work with me, and I will work with you, and so we may have full and complete compliance with this law in a co-operative manner. I am frankly expecting that co-operation; I know I am going to get it.

I shall not take a great deal more of your time, but I do want to mention some of the types of violations that are most frequently found.

One type of violation frequently found is the incorrect classification of employees. All too often we find where an employee has been working overtime because the employer has him classified as an executive or administrative employee and thinks he is exempt. If he does not meet the requirements of the definition for these exempt employees, the law has been violated and we have to do one of two things—ask for restitution of wages for the overtime hours worked based on the provision of time and one-half for overtime, or refer the case to the legal department for legal action.

Sometimes this may involve an employee who is earning a high salary. However, the Administrator has defined these classifications and unless the employee meets the term of the definition he is not exmpet All must go by the standards, or there will not be uniform compliance. Since this classification of employees has caused considerable trouble, I urge that if you have not studied the definitions for those types of employees who may be exempt, you do so immediately. If you have been in error in any of your classifications get your past straightened out and go right in the future. That is just good business, you know.

Another thing that causes trouble is illegal deductions. The law says that deductions which bring the wage below the minimum cannot be made if in the transactions on which those deductions are based the employer makes a profit. We have found many cases where deductions were made for store accounts at company stores or for house rent or other things. If on those transactions the employer makes a profit, and the deductions bring the wage below the minimum it is a violation of the law. So, deductions have given us a great deal of trouble. I think they have given us more trouble in some other industries than in the textile industry, but have had some in the textile industry. To some it may seem as if deductions for store accounts are fine, but I should like to see the time come when all employees get on their feet and pay their bills themselves instead of having them taken out of their pay envelopes. I think they are better citizens if they pay their bills themselves. They are not responsible citizens if someone has to see that their bills are paid for them, and employees should be encouraged by their employers to be responsible citizens.

Another practice which has caused much trouble is where the employees are allowed to start to work before starting time or to work after stopping time, or to work through the lunch hour without this time being recorded and counted as time worked. If they are on piece work they get paid for it, but they are not paid the legal time-and-one-half. Sometimes piece-work employees, if the supervisor is not on the job to prevent it, will try to work a little extra time, not for the purpose of getting time-and-one-half but in order to make longer hours and more money. Later when they learn about the time-and-one-half provision for overtime, they will want it, and it will have to be paid.

Some employers' have installed time clocks with the expectations that these records would always be accepted as accurate. But a time clock record is not accurate if it is not accurately kept. I have known of cases where employees were allowed or required to come early, work a half-hour, and then punch the time clock; or perhaps punch the time clock at closing time in the afternoon and then go back and work an hour. Such falsifications of records calls for drastic legal action. Be sure that your employees stop work when quitting time comes. If you have a second shift, don't let that second shift come on at 2 o'clock when they are supposed to go to work at 3. Sometimes employees tell us they come early to clean their machines; sometimes they say the work load is heavy and they want to do a little to make it lighter when their shift comes on. Regardless of the reason, if you let that second shift go on an hour early you will soon have considerable overtime accumulated. Things of

this kind indicate poor management.

Another violation sometimes encountered is where hours are recorded to fit production. Suppose a spooler or winder is working by the box, and the piece rate is 30 cents a box. In order to make the minimum wage of 32½ cents an hour it is necessary to get nine boxes. Suppose he makes only seven boxes in eight hours, but instead of crediting him with eight hours he is recorded as having worked six hours. Then, according to the time records, he is paid more than the minimum wage, because he gets $2.10 for six hours. That is simply falsification of records and must be dealt with accordingly.

Perhaps an employer decides to let the employees keep their own time on certain operations. This is a definite attempt to shift the responsibility of the employer on to the employee since the law requires the employer to keep an accurate record of hours worked. This practice nearly always results in complaints alleging that waiting time was not recorded; that hours were recorded to fit production on either direct or implied instructions from the supervisor; or for some other reason the time records are not accurate. In such cases the employer has little defense, for he has no knowledge of the facts. And certainly he has shirked his responsibility of keeping an accurate record of the hours his employees are required or allowed to work.

Still another thing which causes trouble is illegal employment of learners. When this Act first went into effect and we began to check on it I was surprised at some of the plants that allowed learners to work without pay. Of course, I know that for the first several weeks learners are not of much value. Perhaps for the first week or two they waste more than they produce. But this does not relieve management of its responsibility to pay these workers for their time. I have known employers to bring people into their plants as learners, and because they did not put them on the payroll they did not regard them as employees. But the law says if you permit or allow persons to work in your plant they are employees and have to be paid the minimum wage.

This matter of learners has given us right much trouble. We have had employers say that the supply of skilled operatives in the textile industry is exhausted and that they cannot afford to employ inexperienced people and pay the minimum wage. The law, of course, allows learners' certificates. The learner's certificate specifies certain occupations; and if you employ learners at occupations other than specified in the certificate then you have violated the law. Learners may be employed only for the occupations specified. For example, they cannot be employed as learners on jobs such as sweeping, or any other occupation which requires little training.

One textile employer told me that his company had adopted the practice of employing high school graduates who were not going to college and teaching them to become skilled operatives. They would learn most of the occupations in a few weeks, because persons of that age learn rapidly. Of course, it costs them something to do this, but they will have good operatives for the future. I think he has a good idea. I suggest that you work out some plan or policy for training people for your industry. In some way young people have to be trained; otherwise when the older people retire or get out of circulation you will have no one to take their places.

Your State Department of Labor, gentlemen, is just as important to you as to your employees. As I have said the things we do are of real value to you, frequently things that save you money. If your inspection service were enlarged we could do a better job; we could save you more. It is up to you, I think, to interest yourselves in the promotion of your Department of Labor. Your Department is an unbiasad agency, not taking sides with employees when they are in the wrong and not taking sides with employers when they are in the wrong.

A letter was placed on my desk one day this week which indicates what one man thinks of the services rendered. It says: "We want to thank your department and your inspector for the prompt and efficient service of your inspector when we were having a freight elevator installed. He visited our plant four times and helped us in getting a jam-up job." This man was buying an elevator, and he was not getting what he was paying for. He did not know anything about elevators except that they go up and down. But our inspector continued his efforts until the elevator met all the requirements for safe operation.

With very limited personnel we do our work. In a State with about 650,000 or 700,000 industrial employees, in a State which is, I think, tenth in the country in value of manufactured products, in a State which is becoming one of the more highly industrialized States in the Union, we have one of the smallest appropriations of any State for the enforcement of the labor laws. To insure safe places of work for your employees, to prevent injury and loss of life in boiler explosions and elevator accidents, and to foster better relations between management and labor, it would be valuable to you to interest yourselves in your Department of Labor, in what it does for you, and what it could do, and to further its objectives.

Mr. B.: I should like to have Mr. Shuford restate the hours a boy under 18 years of age can work.

Mr. Shuford: Nine hours a day and 48 hours a week; he may work at any time between 6 in the morning and 12 midnight.

Mr. B.: Between 6 a. m. and 12 midnight?

Mr. Shuford: That is right.

Mr. C.: Isn't there a provision in the State law that a man on the first shift can work on the second shift if the employee who has his job on the second shift is sick?

Mr. Shuford: Yes, that is in the State law. That is permitted when employees are on shifts of eight hours or less. If the employee on the second shift is sick, for instance, then his fellow employee on the first shift can take his place temporarily.

Mr. C.: Not continuously?

Mr. Shuford: No; just for that day, until you can get someone to take his place.

Question: What about his pay?

Mr. Shuford: When the 40 hours are up, then he must be paid time-and-one-half.

Mr. D.: Are there any requirements for a rest period for women?

Mr. Shuford: Not in manufacturing plants.

Mr. D.: That rest period applies to stores?

Mr. Shuford: Yes.

Mr. C.: Suppose that a man works 16 hours today because a fellow employee is sick and then works 16 hours tomorrow. Is that permitted by the law?

Mr. Shuford: The purpose of that provision was to allow the employer opportunity to get some one to take the place of the employee who is out. Ordinarily you should be able to get someone to take his place by the time the next day begins. That is the position I would

New Floor Maintenance Machine

Industrial Model K is the new high production floor maintenance machine introduced by the G. H. Tennant Co.; marketers of the Tennant System of Industrial Floor Maintenance. This latest addition to the Tennant line, having a capacity four times that of the next smaller model, permits more widespread application of this modern method of dry cleaning floors in the textile field. Old oly floors can be reconditioned; new floors preserved in

their original condition; the problem of grease, oil and traffic stain and coilage is removed; all water and strong detergents are eliminated with the Tennant system, according to the company's announcement. Low cost floor maintenance accompanied by preservation of the wood, increased light reflection and greatly improved sanitary conditions are said to be important factors favoring installation of the Tennant system. Literature is available without obligation. Address, on business letterhead, G. H. Tennant Co., Dept. K, 2530 Second St. North. Minneapolis, Minn.

Textile Mill Lubrication

"Textile Mill Lubrication," a 20-page illustrated booklet just issued by the Tide Water Associated Oil Co., is a comprehensive presentation of modern lubrication practice as applied to textile mill machinery, both plain and anti-friction bearings.

The characteristics of lubricants, both oils and greases under various bearing conditions of temperature and pressure are treated from the practical operating man's viewpoint. The prevention of oil stains is also discussed.

Under another section the difference in characteristics between the lubricants for plain bearings and anti-friction bearings is shown. Likewise the principles to be followed in the attainment of efficient lubrication of comb boxes, spindles, looms and knitting machines is gone into at great length.

In conclusion, the booklet contains recommendations for specific lubricants as they are applied to textile mill machinery. Copies of the Textile Mill Lubricant booklet may be obtained by writing to Tide Water Associated Oil Co., 17 Battery Place, New York.

Eastern Carolina Group Discusses Mill Problems

(*Continued from Page 43*)

Mr. F.: Yes, sir, somewhere in that neighborhood.

Mr. G.: I should like to add to what Mr. F said. We tried that. I broke some yarn and examined it and weighed it, and I could not tell any difference at all in the yarn. According to our engineer's report we were getting 10 pounds in the cans before and are now getting 14½, but I doubt if we were getting the full amount in the can before. At any rate, since putting the compressors on we have increased it 45 per cent.

Mr. Gilliam: What is the size of your sliver?

Mr. G.: 56-grain. We did not change any setting; we made no change whatsoever. I can conceive that it might be necessary to change the setting, however, if your break draft is not enough to take care of the increase. I think if it drafted harder it would be an indication to change the break draft or widen out your rolls, or both.

Mr. H.: Talking about springs, I have seen two types of this compressor. One has a heavy brass spring, and the other has a rather light spring.

Mr. Gilliam: Have any of you had experience with both? Have you, Mr. A?

Mr. A.: We have the light one on. One thing about it, it costs 50 cents and the other is $1. We have not tried the heavier one.

Mr. Gilliam: Which one have you, Mr. H, the heavy one or the light one?

Mr. H.: We have both on. We were getting about 12 pounds before we put this on and now we are getting around 18 to 20 per cent more in the cans.

Mr. E.: I wonder if anybody has tried to accomplish the same results by using a smaller tube. I know of some mills that have tried not only reducing the trumpet but reducing the tube, too—putting a sleeve in the tube to make it smaller. They claim they get equally as good results as with this device, and without increasing the horsepower.

Mr. Gilliam: Has anybody anything to say about that?

Mr. H.: I might say we are waiting for the engineer to come by, to ask him about that. I have not seen any of that tube yet but have heard about it.

Mr. Gilliam: Mr. I, have you tried this device, and have you made any adjustments in it?

Mr. I.: I shall let my carder tell you about that.

Mr. J.: There is no adjustment there unless you use a washer or piece of lug to raise it up so it will not press so hard. I put it on just as it came; then I ran a test and found that the sliver is harder to draft out. In fact, it is like the old type of drawing we used to have way back yonder, when we had practically the same thing that we screwed up on the roller to make the end pull through. If you have it too tight, you kind of grind the fiber up.

Mr. Gilliam: You hurt the fiber?

Mr. J.: That is right; you injure the fiber. We had to

watch that away back yonder, and this is on the same principle. I ran it through and ran a test as to evenness and breakage. I found it was more uneven, with less breakage. Then I put on one I had made and could adjust myself. I could adjust it with a screw, compressing it about 15 or 16 per cent, and I could not tell very much difference. I don't think it helped the work any but don't think it hurt it.

Mr. Gilliam: You mean you gain 15 or 16 per cent in the time?

Mr. J.: Yes, sir, and in the can. And 33 per cent with this other one, that pressed harder.

Mr. Gilliam: In other words, you just compromised on it?

Mr. J.: Yes, sir. I believe the man that put it out claims 15 or 16 per cent is best.

Mr. Gilliam: What about your roll setting on the drawing?

Mr. J.: We tried changing the roll setting. It looked as though it might be a little better with the wider setting on the compressed sliver, but on the regular sliver I could not tell any difference. It was practically the same; we ran it on the testing machine. There is a danger there of compressing that sliver too hard. I think the idea is all right, because in dry weather the sliver in those cans fluffs up; if you run it the length of time in dry weather, when you cannot hold as much humidity as you want, the sliver will fall off unless you press it down in there. So with this compressor you can eliminate that, and I think it is worth while if you just use good common sense in using it.

Mr. Gilliam: In your opinion, then, 15 or 16 per cent would be about right?

Mr. J.: Yes, sir, I think so.

(*Continued in next issue*)

Developments and Trends in Mill Processing Of Rayon Staple

(*Continued from Page 15*)

the speed. Occasionally it is necessary to reduce the speed to 150 to 165 R.P.M. before the loading is entirely eliminated. The effect of low lickerin speed on the breaking strength and quality of spun yarns has not been fully determined. The web breakage in many cases can be taken care of through change of tension. However, when processing coarse deniers of short length, which generally give more trouble than the fine deniers, it has been necessary to use a pan to support the web.

It has been found, in general, that if the card is in good shape and is doing satisfactory work on cotton, that no trouble will be experienced in changing over to rayon staple. Normal card settings used on a good grade of cotton usually work equally well on rayon staple. Because of the great number and types of blends used in rayon staple work today, it is impossible to set up any standard set of rules or conditions. Generally the top flats are run as slow as possible and the top strips reduced to a minimum. While a number of mills have gone to considerable trouble to remove the mote knives and replace them with a steel under casing we have not found this necessary in our work.

For the past few years we have noted that the mills running rayon staple have been increasing the pounds per hour turned out by the card. We wish to point out that there is a definite relationship between the capacity of the card and the uniformity of the yarn produced.

Drawing

Few major problems have been encountered at the drawing frame. However, many of the problems in subsequent operations have been traced to improper roller setting and tensions at the drawing frame. The general tendency has been to set the rollers too close resulting in non-uniform sliver. The trend in type of top roller now appears to be toward the cushioned type roller.

Most of the mills which have been running 2-inch to 2½-inch staple have not been able to spread their rollers sufficiently to handle these staple lengths. Many of the mills have found that they could obtain fairly satisfactory results by removing the third set of rollers and drafting on three rather than on four rollers.

Roving Frames

The majority of the mills starting with 1.5 denier 1½-inch bright rayon staple in the early thirties were accustomed to processing short cotton. These mills began by using similar roller settings and twist factors as employed on short cotton. Under these conditions they experienced low yarn breaking strength, poor weaving results and high fabric shrinkage. The mills gradually found that as they opened up the roller settings at the drawing and fly frames and reduced the twist in the roving that the yarns became stronger and more uniform. These yarns made under more favorable conditions showed a marked improvement in weaving performance. Some of the mills still have a tendency toward excessive twist, particularly when old equipment is used.

The mills found that by employing the basic carding and spinning principles used in processing fine long staple cotton that the mill processing problems on rayon staple were greatly simplified. The cotton mills which were designed for short cotton found it necessary to do considerable work, such as reboring the roller stands and widening the top clearers before they could secure the desired roller settings and obtaining the best results. These mills also found it advisable to reduce the speed of the fly frames about 25%. This was necessary since a reduction in the twist in the roving caused an increase in the speed of the front roller to a point that it interfered with the roving taking the twist in a proper manner.

When the mills began using 2-inch and 2½-inch staple they were unable to spread the rollers sufficiently for these lengths. This necessitated resorting to the slip draft method employing a floating top middle roller. While very large poundages of rayon staple have been run by this method, the results have not been entirely satisfactory.

A few years ago some of the mills began to install long draft roving frames designed to handle 2-inch staple. The results from some of these frames were so encouraging that the mills began demanding that the machinery manufacturers build long draft roving frames which would be designed to handle staple of from 1½-inch to 3 inches in

(*Continued on Page 58*)

Cotton Goods Markets

New York City.—With cotton prices going up, to further confuse an already confused situation, many sellers have withdrawn from the market to consider the outlook.

Demand has been brisk but lack of second and third quarter deliveries has retarded the placing of actual business. Prices continue to rise, especially on spot and nearby shipments which are hard to locate. The market has reached the point where deliveries are of more concern to buyers than price. Both buyers and sellers are worried over the scarcity of supplies and look for an aggravation of this situation over the next few months.

Despite the appearance of stories in Government publications to the effect that defense buying of textiles may be expected to slow down, the market sees no sign of it. Mills are figuring on 10,000,000 yards of twills which will be opened at Philadelphia this month. In addition, mills have large orders for duck to fill and are thinking seriously of applying to State and county authorities for permission to run seven days a week on army contracts. It was pointed out in a number of quarters that Government requirements are taking large percentage of the normal production of many items. It was explained that the army has already bought 15,000,000 sheets in the 63-inch and 72-inch widths or more than 75 per cent of the annual production of these goods.

Duck manufacturers say that any further large increase in their production will depend on their ability to get sufficient yarn, and indicate that priorities may have to be established.

The duck manufacturers also indicate that all of their modern machinery is already fully engaged. Any additional loomage that may be put into service, they say, must consist largely of inefficient, obsolete models. A potential supply of duck is represented by carpet and rug manufacturers as well as other weavers of heavy wide goods whose equipment was turned over to military purposes during the first World War. Any utilization of such facilities now, duck men point out, would further aggravate the yarn bottleneck.

Governmental surveys of the labor market partially confirm mills' reports of a possible dearth of skilled help. A recent survey by the Division of Research and Statistics, Bureau of Employment Security of the Social Security Board, indicated that shortages are most acute in the New England territory and are least noticeable in the South.

Cotton Yarn Markets

Philadelphia.—Production schedules, rather than sales, are troubling spinners now, together with Leon Henderson's interest in the price situation. With prices of yarn up so much over last year at this time, particularly in the combed yarn industry, the government is investigating the situation, and manufacturers must consider the possibility of some action on the part of the government.

An exceptionally large amount of new poundage was placed during the first quarter this year and spinners are pushing production of these orders. The increase was also made possible because this time a year ago was an inactive one for many sellers here.

May has been marked so far by less emphasis on new poundage than April although the decline in new combed orders was in evidence at the beginning of April with even less interest now coming from larger consumers. There has been a fair demand for carded qualities but poundage has not been comparable with that in the recent active selling weeks.

In combed yarns, demand for ply counts is more than twice as active as for singles, but the latter are firm in price, partly due to the few mills now making singles exclusively, other large producers having concentrated on the ply combed counts.

Indications are that the market is on the verge of another general mark-up in rates for single carded knitting yarns.

In the slow-carded grade of knitting yarns, production has been largely booked ahead for several months, but presumably it would be of such yarns that the Army would take for sleeveless summer undershirts, if there is a switch from combed yarn, which has been rumored.

Before present weavers of duck can significantly step up production over their present schedules the sellers say that ways and means will have to be found of obtaining increased supplies of yarn from outside spinners. Spinning, according to them, is still the bottleneck of the duck industry. The problem of adequate yarn supplies for military purposes can only be resolved through governmental establishment of priorities, some duck men believe.

In view of the tight situation in the combed yarn industry, and no relief in sight, it is thought possible that some goods that are now being constructed from this yarn might be changed to use carded yarn; in underwear for instance.

Developments and Trends in Mill Processing Of Rayon Staple

(*Continued from Page 55*)

length. Most of the machinery builders have built roving frames which they claim will handle up to 3-inch staple.

Spinning

Most of the problems at the spinning frames with rayon staple can be traced to processing troubles encountered earlier in the operations. Since the back rollers on the conventional spinning frames are non-adjustable and are set at less than the normal fiber length of the rayon staple used, the floating middle top roller has become standard practice on this type of spinning frame.

In recent years large quantities of rayon staple have been processed on the long draft spinning. This system apparently gives a slightly greater yarn breaking strength than the conventional system when the roll settings are adequate for proper drafting of the staple length. If the staple is slightly too long, there is not much room for adjustment and the results are then less satisfactory than when the old conventional frames are used.

All the new spinning frames being designed for 3-inch staple employ the long draft principle in some form.

In the spinning of rayon staple most mills employ drafts and speeds normally used on cotton. The physical condition of the equipment generally controls the speed at which the frame will operate satisfactorily. The amount of twist used at the spinning is generally controlled by the type of fabric being produced.

Many types of top rollers are now in general use. Cork or composition rollers are usually employed on medium and coarse counts while leather is still preferred by the majority of mills for the finer counts.

Spooling and Warping

Most of the problems at the spooling and warping are related to the quality of the yarn as supplied by the spinner. All types of spooling and warping normally being used on cotton can be adjusted to run spun rayon yarns satisfactorily.

When the slashers are equipped with positive dry feed the warper must use more care in preparing his beams in order to eliminate loose ends.

Slashing

The question of proper slashing technique is still very debatable. Much work is being conducted on spun rayon slashing and we hope the next few years will bring some answers to the general problems involved. The general trend in the past few years has been toward a starch or gum base size primarily on a basis of cost. The cotton slasher is used principally on spun rayon yarns because the equipment is generally available and because of the large volume of moisture to be dried. Most mills agree that the slashing stretch should be held down as low as possible and should not go much over 1½%.

We are looking forward with much interest to the work being done on the sizing of spun rayon at North Carolina State under the auspices of the U. S. Institute for Textile Research. We think that there is a very good possibility of improving the quality of spun rayon fabrics by making a proper study of the sizing of spun rayons.

Weaving

Rayon staple like continuous filament rayon yarn is subject to variations in humidity and tension, and for this reason the same precautions should be observed. More trouble is experienced with shedding or fly from spun rayon than with continuous filament rayon. This is one of the problems which the size manufacturers are trying to overcome.

If the yarn is properly constructed and a good slashing job is done no major problems should be experienced in the weaving of spun rayon provided, of course, that the loom is in good condition. The development of looms designed especially for weaving spun rayon fabrics is being watched with much interest.

Through the combined efforts and co-operation of the mills, machinery manufacturers, rayon producers, and allied textile industries, excellent progress is being made in developing the proper technique for handling rayon staple and the various blends of rayon staple and other fibers. The progress made in the last few years has been phenomenal. More thought is, however, being given to spun rayon today than ever before and we can, therefore, confidently predict that the rayon staple industry holds great promise for the future.

Cotton Mill Production Formulae

(*Contnued from Page 26*)

pendent on the yards per revolution of the measuring roll M and the number of teeth in the worm gears B and D.

Considering the worms A and C as years having one tooth each, and the worm gears B and Q having 100 teeth each, with a measuring roll M ¼ yard in circumference, the yards per wrap=

$$\frac{100\times100}{1\times1}\times\frac{1}{4}=2500.$$

Assuming 6 wraps per beam the yards per beam=2500 $\times6=15000$. The pounds per beam of 24s yarn of 500 ends=

$$\frac{1500\times500}{840\times24}=372.$$

The yards per minute being $1.57\times45=70.65$. The minutes required to fill a beam=$15000\div70.65=212$. Assuming 90 minutes stoppage per beam. The total beams per 8 hours=$60\times8\div212=1.589$ and the pounds=$372\times1.589=591$.

As the theoretical production is 33912 yards, the stoppage=

$$\frac{100-1.589\times15000}{33912}=29.72 \text{ per cent.}$$

Beam Capacity

The measuring gears must be determined of proper size so that the yards per wrap and a certain number of wraps fills the beam full, but no more, as it gives trouble at the slasher when the yarn is not beamed properly. If the beams are not filled to capacity it causes more doffing and creeling at the warpers and spoolers, and more creeling at the slashers, all of which cause a loss in production at these processes.

Other Irregularities

The percentage of production obtainable with beam warpers is dependent to a great extent on the quality of the work done at the spoolers, assuming that the warp yarn is right otherwise. Some of the causes for stoppage are slip knots, loose ends, bunches of waste, spools not filled properly, tangle spools, spooler tenders breaking thread on barrel and tying to end when the right end is hard to find, etc., all of which has to be overcome to realize good work and maximum production from these machines.

Record Rayon Yarn and Staple Fiber Output Reported for First Quarter

Production of both rayon yarn and staple fiber by American mills during the first three months of 1941 established a new quarterly record, states the current issue of the *Rayon Organon*, published by the Textile Economics Bureau, Inc.

Rayon filament yarn output totaled 106,200,000 pounds for the period ended March 31st. This total exceeded the previous quarterly record of 103,700,000 pounds produced during the fourth quarter of 1940 by 3 per cent, and was 11 per cent greater than the output reported for the first quarter last year.

"Hhis record-breaking performance of the first quarter," states the *Organon*, "was made possible by the new high levels of productiton in both of the major divisions of the industry. The production of viscose-cupra process yarn for the first quarter reached 67,900,000 pounds and acetate yarn output increased to 38,300,000 pounds.

"The principal reason for this record output was the continued high level of demand for rayon yarn. The normal seasonal dullness in demand, which generally makes its appearance during the latter part of the first quarter, was absent this year."

United States production of rayon staple fiber totaled 25,000,000 pounds in the first quarter of 1941, a new quarterly record. This total compares with a previous record high of 23,200,000 pounds in the fourth quarter of 1940 and with an output of 20,400,000 pounds in the first quarter of 1940. The production trend continues to be definitely upward.

Although relatively small quantities of silk and rayon have been used directly for national defense purposes thus far, the demand for cotton and wool products has mounted rapidly.

The *Organon* estimates that for the period July, 1940, through April, 1941, the raw cotton required for the manufacture of cotton textiles for national defense has approximated 300,000,000 pounds, or 600,000 bales. This figure applies to purchases made over the period for the Army, Navy, Marine and Air Corps, and other defense agencies.

"The real activity in cotton textile defense orders did not begin until about Novebber, 1940," says the *Organon*, "and, while many of the present contracts cover deliveries to approximately the middle of 1941, the actual consumptiton of raw cotton for these contracts already has taken place. The average monthly consumption, therefore, would be about 100,000 bales, or 12 per cent of the average consumpttion of 800,000 bales over the last several months.

"Thus, while the purchases of cotton textiles for the defense program seem inordinately large when considered alone, the relation of these defense purchases to total cotton consumption shows that the purchases made for defense are still small as compared with the regular civilian and industrial needs."

Dr. Red

"Dr. Red" is the name of a new book by Thelma Thompson, who, in private life, is Mrs. Walter Slayden, and formerly taught in the public schools at Thomaston, Ga.

The scenes are laid in a cotton mill village in north Georgia, and aside from the love stories, deals with fifth column activities and the destruction of a cotton mill by Germany agents. The story, as far as the German agents are concerned, is somewhat overdrawn but the book is well written and interesting.

Booklet On Quadrafos

A new booklet has been issued by American Cyanamid & Chemical Co., New York City, entitled "Quadrafos (Sodium Tetraphosphate)," in which the product is explained, both from a chemical standpoint and from the standpoint of its properties and actions.

Used in the textile industry for water softening, Quadrofos is said to be required in hard water in amount from five to six times the total weight of hardness components expressed as calcium carbonate equivalents.

The booklet gives information, for cotton goods, on kier boiling, bleaching, dyeing, back filling, sizing, and finishing. On wool it is used in scouring, piece goods scouring, and dyeing. It is used for throwing, boil-off, dyeing and finishing of rayon.

Cotton-Textile Institute and National Cotton Council Merge Programs

The Cotton-Textile Institute and the National Cotton Council, as a normal development of the joint operation of their promotion programs decided upon last summer by Dr. Claudius T. Murchison and Oscar Johnston, presidents of the respective organizations, have now taken a logical further step.

Their programs have been consolidated into one great effort in the cause of cotton consumption.

Joint signatures of the two organizations will appear on all advertising of each, as well as on virtually all other printed material. Both are working to make National Cotton Week the outstanding success it now promises to be. Each is consulting with the other in the further development of the promotion program for the industry.

The promotion output during the past six weeks has been exceptionally heavy because of National Cotton Week. The Council has printed and distributed a community bulletin, which went to thousands of organizations in the cotton belt and which offered specific display materials and information on community observance; the Institute printed and distributed 28,000 copies of "Retail Information," a store bulletin giving National Cotton Week merchandising helps and reporting the magazine support for cotton. Each pamphlet was jointly signed.

The Institute printed and distributed 500,000 National Cotton Week posters, and both the Institute and Council distributed their special editions of "Cotton News Letter" and "Cotton in News and Pictures." In addition, they distributed large quantities of informational material to stores, clubs, newspapers, magazines, wholesalers, garment makers, converters, advertising agencies, railroads, banks and other institutions and groups.

Over the Institute and Council joint signature, the Council released full-page cotton advertising in fashion magazines; and over the signature of the Cotton Consumption Council (with names of supporting organizations included) the Institute released trade paper advertising to win merchandisers' support for Nattional Cotton Week.

Other activities included revision of the "cotton emblem," with the "100% American Cotton" changed to "American Cotton;" second printing of 50,000 copies of a pamphlet, "Protect Your Bedding with Cotton Bags;" and reprint of a pamphlet on the advisability of using cotton bags.

"The Southerner" Now in Operation

On April 1st "The Southerner," Nos. 47 and 48, comprising three of the nation's newest and most modern all-coach streamlined passenger trains, were on the rails of Southern Railway System and Pennsylvania Railroad between New York, Washington and New Orleans, inaugurating a new daily coach train service in both directions between the East and New Orleans via Atlanta and Birmingham. Each of the streamliners consists of a 2,000 H. P. Diesel-electric locomotive and seven stainless steel streamlined cars including dining car, observation-lounge-tavern car, all of the latest design and construction and air-conditioned throughout.

What To Do About Denim Stocks

Washington, D. C.—Inter-market statistics are the greatest single need of denim mills in managing their cloth inventories, according to a study made by the Industrial Research Department of the Wharton School of Finance and Commerce, University of Pennsylvania, publication of which is announced by the Textile Foundation.

This report, *What To Do About Denim Stocks,* is the first of a series of seven which the Industrial Research Department of the Wharton School has prepared for the Textile Foundation under the general title *Inventory Policies in the Textile Industries.* Others in the series to be published in the near future will deal with inventory problems of the wool-textile (men's wear division), the cotton-fine goods, the rayon-weaving, cotton print-cloth, and full-fashioned hosiery industries. The final number of the series will summarize the preceding industry reports and discuss recent inventory trends in the production and distribution of textiles.

What To Do About Denim Stocks is a case study of the inventory experience during the 1930's of an industry manufacturing staple finished goods. It reveals that denim mills drifted into the warehouse business during this decade, and cites the experience as indicative of the kind of inventory problem that can arise even when style plays no part in production or distribution and when both are concentrated in strong hands.

How to reduce or offset the costs of being in the warehouse business is a far more important question to denim mills in the 1940's than how to get out, according to the analysis. Barring unforeseen changes wrought by the defense program, the industry will have to solve its own problem. Two steps are outlined in the study by which denim mills might reduce their costs: (1) reduce average volume of stock carried just to service deliveries, and (2) minimize adjustments granted on unfilled contracts. Special emphasis is laid, however, on planned operations as a means of offsetting the costs of warehousing denims. Why carry stocks for customers unless these goods can be made the basis of stable operations?

Whatever attack denim mills make on their stock problem, they will need more facts about their business than they now possess, states the report, particularly if they elect to plan their output. They will need to know the trend of consumption and the ebb and flow of cutter and distributor speculation. The only practical basis for the development of such statistics is an inter-market program helpful to distributor, cutter, and mill alike.

As an initial inter market statistical program helpful to all participants, the study recommends the collection and exchange of the following information currently: (1) mill production, (2) denim commitments and takings of representative cutters, (3) denim overalls commitments and takings of representative wholesalers and large-scale retailers, and (4) sales of denin overalls to consumers by large-scale retailers.

The inventory series of studies was recommended to the Textile Foundation by the Committee on Economic Research of the U. S. Institute of Textile Research of which Fessenden S. Blanchard is chairman.

Copies of the report, *What To Do About Denim Stocks,* at 50 cents each, may be obtained from the Textile Foun-

dation, Washington, D. C. The Foundation is also accepting orders for the entire series at $3.00, individual reports to be mailed on publication.

One Enamel for Bobbins of Many Types

To meet a specialized requirement of the textile industry—the finishing of some or all textile bobbins and quills for the purpose of identifying the yarn by color—the Sherwin-Williams Co. has introduced a new line of lacquer colors known as "Bob-N Enamels."

The line was demonstrated for the first time at the Southern Textile Exposition in Greenville, S. C., March 31st to April 5th, by means of a newly-invented machine which now makes it possible to apply bobbin enamels automatically instead of using the tedious hand method of the past. The machine is the creation of D. A. Jolly, formerly of Cannon Mills at Kannapolis, N. C.

In undertaking the manufacture of "Bob-N Enamels," the Sherwin-Williams Co. has proceeded on the basis of exhaustive study of the many different conditions under which bobbin enamel is used by the textile industry. There are so many variables in the method of application and the use of bobbins by the industry that hitherto it has not been possible to produce a universally satisfactory bobbin enamel. The new line of "Bob-N Enamels" has been produced to comply with the specifications given for a satisfactory bobbin enamel by many users of this product.

"Bob-N Enamels" come in 16 colors, plus clear, black and white. It is claimed for them by the manufacturer that they have the following exceptional qualities: brilliant color, rapid drying, solid covering in one coat, durability, resistance to heat and to most conditioning liquids, and no tendency to stain textile products.

A color card has been prepared to accompany "Bob-N Enamels," giving all details on the new line and precautions to observe before, during and after painting.

S. C. Mills Consumed 28,470,000 Bales of Cotton in 25 Years

Figures from Federal and State sources show that South Carolina mills have consumed 28,470,000 bales of cotton in the last 25 years, 4,000,000 more bales than have been produced by the State's farmers during the same period, and that 1940 consumption is the highest on record.

Using a 25-year average lint price, it is estimated that South Carolina mills have spent $2,625,000,000 for cotton since 1915.

According to statistics of the U. S. Bureau of the Census, cotton production in this State has fluctuated from a high of 1,652,177 bales in 1920 to a low of 517,464 in 1922. The 25-year average has been 978,135 bales.

Consumpttion by South Carolina mills, on the other hand, has averaged 1,139,000 bales for the same period, varying from the 1940 high of 1,515,734 to a 1919 low of 837,152, reports of the State Department of Labor show.

Although the 1940 record consumption was more than double the 614,528 bales produced by the State's farmers during that year, those close to the industry predict that the 1941 consumption figure will be even higher.

Visiting the Mills

Intimate Glimpses of Activities in Southern Textile Plants and the Men Who Own and Operate Them

By Mrs. Ethel Thomas Dabbs (Aunt Becky)

NORTH CHARLOTTE, N. C.

Highland Park Mills Nos. 1 and 3

It is always a pleasure to visit the good people of Highland Park Mills in North Charlotte, and to note the steady progress of improvements.

This time we found a cloth room 100x100 feet, almost completed, at north side of the mill. This will add much to the comfort and efficiency of the large group of operatives who have had such cramped quarters in the old cloth room. W. M. James is overseer, and is he proud of his new quarters!

Loom fixers are happy over having shower baths prepared for them—a real joy in hot weather. Now they can leave their work clothes at the mill and go home clean and comfortable. One fellow said, "I'll be dressing up to go see my wife now, like I used to do when she was my sweetheart!" Of course, the wife will be cleaned up, too, to welcome him home, and both will be happy.

People who used to see these mills 25 years ago would not recognize them now. The mills were dirty and nobody seemed to care for appearances, personal or otherwise.

Now the mills are delightfully clean in every department and the people are as neat and clean as anyone could wish.

No. 3 spinning room is among the cleanest, nicest, most modern and best running in the entire South.

Arthur Jarrett, general superintendent of these mills (and also of Highland Park No. 2, in Rock Hill, S. C.) has an enviable record in the textile industry. He likes to tackle a hard job and make good on it.

He and L. W. Green, superintendent of No. 1, and general overseer carding in No. 3, take pleasure in giving the young men in their employ a chance to work up. Around 90 per cent of the second hands and section men in these mills were promoted under these two progressive men.

Mill No. 1—The Rayon Mill

This mill has been so thoroughly renovated that it looks "as good as new," though it is a very old building. The big main office is located at this plant. Horace Monteith has been transferred here from the office at No. 3 and seems thoroughly at home.

T. A. Lewis is the genial overseer of carding and spinning; F. K. Keziah is card grinder, and Chas. C. Hinson, section man in spinning; H. M. Yandle is overseer dyeing.

Mill No. 3

A large variety of styles and colors captivate the attention here. The cloth room can boast of every hue of the rainbow, and then some. Nearly 2,000 looms are busy day and night on staple and fancy ginghams, rayons and shirtings.

W. B. Shannon, general overseer weaving, has a wide experience in fancy fabrics and a reputation for good management. He is well liked by his employees.

R. B. Dawkins, T. M. Brown and D. C. Yarborough are overseers weaving; J. L. Rice, J. H. Williams, D. L. McCaskill and A. L. Sides are second hands.

Progressive loom fixers: Odell Myers, M. M. Hulsey, L. A. Linker, W. L. Holcombe, E. V. Bullard, Fred McNinch, Glenn Barnett, G. H. Pickens, J. W. Adams, J. C. Mills, head loom fixer on Drapers; J. M. Brackett, samples.

C. O. Wilson, overseer carding, first shift; W. E. Hopper, overseer on second shift; Guy Fisher, section man; J. D. Ledwell, comber fixer; H. M. Holcombe, card grinder.

M. A. Enloe, overseer spinning; L. A. Marshall, overseer spooling and warping; Lloyd H. Pope, designer and production; J. L. Beaver, general overseer dyeing; H. M. Floyd, supply man; C. H. Ogden, overseer drawing-in.

W. H. Fleenor is one of the clerks; T. B. McKeown, master mechanic. No doubt there are other key men that I failed to contact.

GASTONIA, N. C.

Trenton Cotton Mills

Members of the Textile Association will remember A.

M. (Arthur) Dixon, who in years past thrilled us all with his "silver-tongued oratory." He is president of this, and also of Dixon Mills, Inc., in another part of Gastonia. His brother, Kay Dixon, is treasurer.

Trenton is only three blocks south from the business section of the city and operatives have all city advantages. The mill is fitted with the best of machinery, is absolutely clean, and work runs fine. The people are among the best.

There is a new front to the the recently enlarged office building, where the officials and Superintendent S. M. Cauble have their separate domains, each well planned and furnished. The village homes are neatly designed and attractively painted.

Just about all the second hands and section men get the Textile Bulletin, but Aunt Becky did get a few others —renewals and new ones—including R. C. Hagler, overseer carding; W. F. Crowder, overseer spinning; D. S. Laws, master mechanic, and Superintendent S. M. Cauble. Mr. Crowder used to be with Chadwick-Hoskins Mill, Charlotte, and is a good friend of Mr. Clark and the Textile Bulletin.

I have never received a heartier welcome than was extended me here by the Messrs. Dixon, Superintendent Cauble and his overseers, and I thoroughly enjoyed my visit.

At Smyre Mill, I was the dinner guest of Mrs. Allene Leonhardt and her parents, Mr. and Mrs. N. W. Holland. Mr. Holland is overseer carding in No. 2 Smyre Mill, where our friend, Marshall Dilling, is superintendent and secretary.

These mills are running full blast full time, and everybody seemed prosperous and happy.

Our Home Town

(By J. N. Parker)

We live in a lovely village,
Tho it is not known for its fame;
We are just one happy family,
And know each other by name.

It is not a railroad center;
No strangers to come and go—
So we have no hard luck stories
From those we do not know.

We have a good weekly paper
With an Editor that is never slow.
She always diligently and swiftly
Gets all the news we should know.

We have our gardens in Springtime,
We cure our meat in the Fall,
And if one of us suffers misfortune
We get a donation from all.

We have five Protestant Churches,
Tho the steeples are not very tall;
We have in them ministers and teachers
That are interested in the welfare of all.

(*Continued on Page 68*)

Southern Sources of Supply

For Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

ACME STEEL CO., 2838 Archer Ave., Chicago, Ill. Sou. Office and Warehouse, 603 Stewart Ave., S.W., Atlanta, Ga., F. H. Webb, Dist. Mgr. Sou. Sales Reps.: Frank G. German, 1617 Beverly Drive, Charlotte, N. C., Phone 3-3293; G. R. Easley, 107 Manly St., Greenville, S. C., Phone 1610; William G. Polley, 937 Cherokee Lane, Signal Mountain, Tenn., Phone Chattanooga 8-2635; John C. Brill, 309 Magazine St., New Orleans, La., Phone Magnolia 5859. Warehouses at Atlanta, Ga., Greenville, S. C., New Orleans, La.

AMERICAN CYANAMID & CHEMICAL CORP., 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, 822 W. Morehead St., Charlotte, N. C., Hugh Puckett, Sou. Sales Mgr. Reps., John D. Hunter, E. H. Driver, Paul F. Haddock, A. W. Foley, Charlotte Office; E. J. Adams, 1404 S. 22nd St., Birmingham, Ala.; Jack B. Button, 610 N. Mendenhall St., Greensboro, N. C.; C. B. Suttle, Jr., 423 Clairmont Ave., Decatur, Ga.; K. E. Youngchild, 10 South St., Mobile, Ala.

AMERICAN MOISTENING CO., Providence, R. I. Sou. Plants, Charlotte, N. C., and Atlanta, Ga.

AMERICAN VISCOSE CO., 350 Fifth Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C. Harry L. Dalton, Mgr.

ARMSTRONG CORK CO., Industrial Div., Textile Products Section, Lancaster, Pa. Sou. Office, 33 Norwood Place, Greenville, S. C. J. V. Ashley, Sou. Dist. Mgr.

ARNOLD, HOFFMAN & CO., Inc., Providence, R. I. Chester L. Eddy, Asst. Sales Mgr., 903-904 Woodside Bldg., Greenville, S. C. Sou. Reps., W. Chester Cobb, and Erwin Laxton, Charlotte, N. C., Office; John H. Graham, Box 904, Greenville, S. C.; Harold T. Buck, 1615 12th St., Columbus, Ga.; John R. Brown, P. O. Box 331, Meridian, Miss.

ASHWORTH BROS., Inc., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S.W., Atlanta, Ga.; Texas Rep., Textile Supply Co., Dallas, Tex.

AUFFMORDT & CO., C. A., 2 Park Ave., New York City.

BAHNSON CO., THE, Winston-Salem, N. C.

BANCROFT BELTING CO., Boston, Mass. Warehouse and Sou. Distributor, Carolina Supply Co., Greenville, S. C.

BARBER-COLMAN CO., Rockford, Ill. Sou. Office, 31 W. McBee Ave., Greenville, S. C., J. H. Spencer, Mgr.

BARKLEY MACHINE WORKS, Gastonia, N. C.

BARNES TEXTILE ASSOCIATES, Inc., 10 High St., Boston, Mass. Sou. Office, 1409 Johnston Bldg., Charlotte, N. C.

BECCO SALES CORP., Buffalo, N. Y. Sou. Reps., J. D. Quern and D. S. Quern, 1930 Harris Road, Charlotte, N. C.

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Visiting the Mills

(*Continued from Page 65*)

Now I will give you the story,
Tho I'm sure you know it quite well,
Of a man who came from the mountains
Who could see the future and tell.

He saw the multiplied masses
Just idle with nothing to do;
So he built us a modern industry
And equipped it with men that knew.

They trained us to handle machinery
And to love each other as well,
They knew that the wonderful dreamer
Would see that all was done well.

Who is this wonderful dreamer?
The stranger would say to me.
His name is William A. Erwin,
And our home is in Cooleemee.

You may boast of your modern conveniences
And also your family tree.
But I love the friendly village
My dreamer has planned for me.

How Swiftly Fate Can Disrupt Such A Happy Family Picture!

That unforeseen accident on the way home—lurking just around the next curve! Or, perhaps it's a bad cold that leads to serious illness, with loss of time from the job. Maybe it spells a trip to the hospital, with all the extra expenses this involves.

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